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C2C CAA CQF CQL CQM CQS CQZ CRA CRB CRE CRM CRQ CRV CSC CSD CSJ CSM CSN C1173 C1175 C1370 C1371 C1372 C1373 C1380 C1382 C139X C1390 C1392 C1400 C1410 C1416 C1432 C1440 C1464 C1470 C1510 C1512 C1530 C1590 C1594 C1600 C1604 C1607 C1620 C1628 C1650 C1651 C1652 C1654 C200 C202 C213 C215 C22Y C220 C225 C226 C227 C246 C247 C25X C25Y C250 C251 C252 C253 C254 C255 C256 C28X C31Y C311 C313 C314 C315 C318 C32Y C321 C323 C326 C332 C337 C339 C34Y C340 C341 C342 C346 C350 C351 C352 C355 C36Y C360 C361 C364 C365 C366 C367 C368 C37Y C373 C380 C385 C39Y C390 C395 C396 C397 C440 C461 C464 C51X C511 C514 C52Y C521 C531 C536 C537 C551 C552 C553 C555 C574 C584 C594 C60Y C600 C601 C612 C614 C615 C62X C620 C623 C624 C625 C626 C627 C628 C634

(52), (56) and (58) continued overleaf

#### (54) Pesticidal heterocyclic and phenyl compounds

(57) A compound of formula (I),  $R-S(O)_nCH_2C(CH_3)=CF_2$  or a salt thereof, wherein n is 0, 1 or 2; and R is a heterocyclic or phenyl group, has nematicidal, insecticidal and acaricidal activity.

(52) cont

C65X C650 C651 C652 C656 C658 C66X C661 C662 C665 C666 C668 C67X C670 C671 C672 C675 C676 C678 C679 C694 C695 C698 C70Y C72X C72Y C75X C752 C753 C758 C76X C761 C762 C78Y C780 C80Y C802 C805 U1\$ S1308 S1312

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#### HETEROCYCLIC AND PHENYL COMPOUNDS

The present invention relates to novel heterocyclic and phenyl derivatives having nematicidal, insecticidal and acaricidal activity, to processes for their preparation, to compositions containing them, and to methods for killing or controlling nematode, insect or acarid pests using them.

According to the present invention there is provided a compound of formula (I):

$$R-S(O)_nCH_2CH_2C(CH_3)=CF_2 \qquad (1)$$

or a salt thereof, wherein n is 0, 1 or 2; and R is a group of formula (II) to (XXIV):

(XI)

wherein:

the S(O)nCH2CH2C(CH3)=CF2 group is at least one of R1 (when attached to a carbon atom), R2, R3, R4, R5, R6, R7 or R8;

R1 (when attached to a carbon atom), R2, R3, R4, R5, R6, R7 and R8 are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, cycloalkyl, alkylcycloalkyl, alkoxy, alkenyloxy, alkynyloxy, hydroxyalkyl, alkoxyalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted heteroaryl, optionally substituted arylalkoxy, optionally substituted aryloxyalkyl, optionally substituted heteroaryloxy, optionally substituted heteroarylalkoxy, optionally substituted heteroaryloxyalkyl, haloalkyl, haloalkenyl, haloalkynyl, haloalkoxy, haloalkenyloxy, haloalkynyloxy, halogen, hydroxy, cyano, nitro, -NR8R9, -NR9COR10, -NR9CSR10, -NR9SO2R10, -N(SO2R9)(SO2R10), -COR9, -CONR9R10, -alkylCONR9R10, -CR9NR10, -COOR9, -OCOR9, -SR9, -SOR9, -SO2R9, -alkylSR9, -alkylSOR9, -alkylSO2R9, -OSO2R9, -SO2NR9R10, -CSNR9R10, -SiR9R10R10, -OCH2CO2R9, -OCH2CH2CO2R9, -CONR9SO2R10, -alkylCONR9SO2R10, -NHCONR9R10, -NHCSNR9R10, or an adjacent pair of R1, R2, R3, R4, R5, R6, R7 and R8 when taken together form a fused 5- or 6-membered carbocyclic or heterocyclic ring;

R1 (when attached to a nitrogen atom) is hydrogen, optionally substituted alkyl, cycloalkyl, alkylcycloalkyl, hydroxyalkyl, alkoxyalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted heteroaryl, optionally substituted heteroarylalkyl, optionally substituted heteroaryloxyalkyl, haloalkyl, optionally substituted heteroaryloxyalkyl, haloalkyl, hydroxy, cyano, nitro, -NR9R10, -NR9COR10, NR9CSR10, -NR9COOR10, -NR9SO2R10, -N(SO2R9)(SO2R10), -COR9, -CONR9R10, -alkylCONR9R10, -CR9NR10, -COOR9, -OCOR9, -SO2R9, -SO2R9, -alkylSOR9 -alkylSO2R9, -OSO2R9, -SO2NR9NR10, -SR9, -SOR9, -SO2R9, -CSNR9R10, -SiR9R10R10, -OCH2CO2R9, -OCH2CH2CO2R9, -CONR9SO2R10, -alkylCONR9SO2R10, - NHCOR9R10, or -NHCSR9R10; and

R9, R10 and R11 are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, optionally substituted aryl, optionally substituted arylalkyl, haloalkyl, haloalkyl, haloalkynyl, halogen, or hydroxy.

We would explain that, for ease of reference only, the substituents on the R group have been named in accordance with their position on this R group. For example, when R has the formula (II), substituents R2, R3, R4 and R5 are in positions 2, 3, 4, and 5, respectively, on the ring. For the avoidance of doubt, the -S(O)nCH2CH2C(CH3)=CF2 group can be at any of the substituent positions indicated by R1 (when attached to a carbon atom) to R8.

When any one of R1 to R11 is an alkyl group, or contains an alkyl moiety, it may be straight or branched chain and is preferably C1-6 alkyl, even more preferably C1-4 alkyl, for example methyl, ethyl, propyl, iso-propyl, n-butyl, iso-butyl, sec-butyl or t-butyl. When the alkyl group is acting as a "linking" group, ie R-alkyl-, for example in R-alkylSR8, C1-4 alkyl or C1-2 alkyl are particularly preferred.

When any one of R1 to R11 is a substituted alkyl group, or contains a substituted alkyl moiety, it may comprise one or more substitutents chosen from halogen, nitro, cyano, -COOR9 or a salt thereof, hydroxy, alkoxy, alkoxyimino, alkoxycarbonyl, carbamoyl, mono- or di-alkylamino, acylamido (preferably C1-6 acylamido), alkanesulfonyl, and arylsulfonyl, which may itself be substituted with halogen, alkoxy or nitro.

When any one of R1 to R11 is an alkenyl or alkynyl group, or contains an alkenyl or alkynyl moiety, it may be straight or branched chain and is preferably C2-6 alkenyl or C2-6 alkynyl, even more preferably C2-4 alkenyl or C2-4 alkynyl, for example vinyl, allyl, but-3-enyl, 3-methyl-but-3-enyl, ethynyl or propargyl.

When any one of R1 to R11 is a substituted alkenyl group, or contains a substituted alkenyl moiety, it may comprise one or more substitutents chosen from halogen, COOR9 or a salt thereof, hydroxy, nitro and cyano.

When any one of R1 to R8 is a cycloalkyl or alkylcycloalkyl group, or contains a cycloalkyl or alkylcycloalkyl moiety, it is preferably C3-6 cycloalkyl or C4-7 alkylcycloalkyl, for example, cyclopropyl, cyclopentyl, cyclohexyl or methylcyclopropyl.

When any one of R1 to R8 is an alkoxy, alkenyloxy, alkynyloxy or alkoxyalkyl group, or contains such a moiety, it is preferably C1-6 alkoxy, for example, methoxy, ethoxy, n-propoxy, iso-propoxy, n-butoxy, iso-butoxy, sec-butoxy and t-butoxy; C2-6 alkenyloxy, for example, vinyloxy, allyloxy, but-3-enyloxy and 3-methylbut-3-enyloxy; C2-6 alkynyloxy, for example, propargyloxy; C2-6 monoalkoxyalkyl, for example, methoxymethyl, methoxyethyl and ethoxymethyl; or C3-6 dialkoxyalkyl, for example, dimethoxymethyl and diethoxymethyl.

When any one of R1 to R11 is aryl, or contains an aryl moiety, it is preferably C6-10 aryl, more preferably it is phenyl. When any one of R1 to R11 is arylalkyl, it is preferably C6-10 arylmethyl or C6-10 aryl-ethyl, even more preferably benzyl or phenethyl.

When any one of R1 to R8 is heteroaryl, or contains a heteroaryl moiety, it is preferably a 5 or 6 membered ring containing at least one O, N or S atom as the heteroatom, for example,

pyridine, pyrrole, pyrazine, furan or thiophene. When any one of R1 to R8 is heteroarylalkyl, it is preferably heteroaryl-C1-2 alkyl.

When any one of R1 to R11 is a substituted aryl, arylalkyl, heteroaryl, or heteroarylalkyl group, it may comprise one or more substituents chosen from alkyl, alkoxy, haloalkyl, haloalkoxy, halogen, hydroxy, COOR9 (or a salt thereof), aminosulfonyl, cyano or nitro. Examples of these groups are 4-methylphenyl, 4-chlorophenyl, 4-fluorophenyl, 4-nitrophenyl, 3-trifluoromethylphenyl, 4-aminosulfonylphenyl, 4-chlorobenzyl, 4-fluorobenzyl, 3-trifluoromethylbenzyl, 4-trifluoromethylbenzyl, 4-nitrobenzyl and 4-methylbenzyl.

When any one of R1 to R8 is a aryloxy or arylalkoxy group, it is preferably phenoxy, benzyloxy or phenethoxy.

When any one of R1 to R8 is a substituted aryloxy, arylalkoxy, heteroaryloxy or heteroarylalkoxy group, it may comprise one or more substituents chosen from alkyl, alkoxy, halogen, halogle, ha

When any one of R1 to R11 is halogen, or contains a halogen moiety, it is preferably fluorine, chlorine, bromine or iodine. Even more preferably, it is fluorine, chlorine or bromine.

When any one of R1 to R11 is a haloalkyl, haloalkenyl or haloalkynyl group, it may contain one or more halogen atoms, preferably chlorine, fluorine or bromine. Examples of these groups are fluoromethyl, difluoromethyl, trifluoromethyl, chloromethyl, dichloromethyl, trichloromethyl, 2-fluoroethyl, 2,2,2-trifluoroethyl, pentafluoroethyl, 2,2-difluoroethenyl, 3,3-dichloroprop-2-enyl, 2-chloroprop-2-enyl, 3,4,4-trifluorobut-3-enyl, 4-fluorobut-3-enyl, 4,4-difluorobut-3-enyl, 4,4-difluo

When any one of R1 to R8 is a haloalkoxy group, a haloalkenyloxy group or a haloalkynyloxy group, it may contain one or more halogen atoms, preferably chlorine, fluorine or bromine. Examples of the preferred C1-6 alkoxy, C2-6 alkenyloxy and C2-6 alkynyloxy groups are trichloromethoxy, fluoromethoxy, difluoromethoxy, trifluoromethoxy, 2-fluoroethoxy, 2.2.2-trifluoroethoxy, pentafluoroethoxy, 1,1,2,2-tetrafluoroethoxy, 2,2-difluoroethenyloxy, 3,4,4-trifluorobut-3-enyloxy, 4-fluorobut-3-enyloxy, 4,4-difluorobut-3-enyloxy, 3-methyl-4,4-difluorobut-3-enyloxy, 2-chloroprop-2-enyloxy and 3,3-dichloroprop-2-enyloxy.

When any one of R1 to R8 is the group -NR9R10, it is preferably -NH2; a monoalkylamino group, for example, methylamino and ethylamino; or a di-alkylamino group, for example, dimethylamino and diethylamino.

When any one of R1 to R8 is the group -NR9COR10, it is preferably -NHCHO; a C2-6 acylamino group, for example -NHCOCH3, -NHCOC2H5; or benzamido, which may be substituted with one or more substituents chosen from halogen, for example, chlorine, fluorine and bromine; alkyl, for example, methyl and ethyl; alkoxy, for example, methoxy and ethoxy; haloalkyl, for example, chloromethyl, fluoromethyl, trifluoromethyl and 2,2,2-trifluoroethyl; haloalkoxy, for example, trifluoromethoxy and 2,2,2-trifluoroethoxy; hydroxy; cyano and nitro.

When any one of R1 to R8 is -NR9CSR10, R9 and R10 are preferably alkyl, for example methyl and ethyl.

When any one of R1 to R8 is the group -NR9SO2R10, it is preferably an alkanesulfonamido group, for example, -NHSO2CH3 and -NHSO2C2H5.

When any one of R1 to R8 is the group -N(SO2R9)(SO2R10), it is preferably a di-(alkanesulfonyl)amino group, for example, -N(SO2CH3)2 and -N(SO2C2H5)2.

When any one of R1 to R8 is the group -COR9, it is preferably a C1-6 acyl group; or an optionally substituted benzoyl group. The benzoyl may be substituted with one or more substituents chosen from halogen, for example, chlorine, fluorine and bromine; alkyl, for example, methyl and ethyl; alkoxy. for example, methoxy and ethoxy; haloalkyl, for example, chloromethyl, fluoromethyl, trifluoromethyl and 2,2,2-trifluoroethyl; haloalkoxy, for example, trifluoromethoxy and 2,2,2-trifluoroethoxy; hydroxy; cyano and nitro. Examples of preferred -COR8 groups are acetyl, propionyl, n-butanoyl, 4-chlorobenzoyl, 4-fluorobenzoyl, 4-bromobenzoyl, 4-methylbenzoyl and 4-trifluoromethylbenzoyl.

When any one of R1 to R8 is the group -CONR9R10, it is preferably -CONH2; an N-alkyl-carboxamido group, for example -CONHCH3, -CONHC2H5 and -CONHCH2CH2CH3; or an N.N-dialkyl-carboxamido group, for example -CON(CH3)2, -CON(CH3)(C2H5) and -CON(C2H5)2.

When any one of R1 to R8 is the group -alkylCONR9R10, it is preferably -C1-4 alkylCONR9R10.

When any one of more of R1 to R8 is the group -CR9NR10, it is preferably -CH=NOH.

When any one of R1 to R8 is the group -COOR9, it is preferably -COOH; an alkoxycarbonyl group, for example methoxycarbonyl and ethoxycarbonyl; or a

haloalkenyloxycarbonyl group, for example 3.4.4-trifluorobut-3-enyloxycarbonyl, 4-fluorobut-3-enyloxycarbonyl, 4.4-difluorobut-3-enyloxycarbonyl and 3-methyl-4.4-difluorobut-3-enyloxycarbonyl.

When any one of R1 to R8 is the group -OCOR9, it is preferably a C2-6 acyloxy group, for example -OCOCH3 and -OCOC2H5; or an optionally substituted benzoyloxy group. The benzoyloxy group may comprise one or more substituents chosen from halogen, for example, chlorine, fluorine and bromine; alkyl, for example, methyl and ethyl; alkoxy, for example, methoxy and ethoxy; haloalkyl, for example, chloromethyl, fluoromethyl, trifluoromethyl and 2,2,2-trifluoroethyl; haloalkoxy, for example, trifluoromethoxy and 2,2,2-trifluoroethoxy; hydroxy; cyano; and nitro.

When any one of R1 to R8 is the group -SR9, R9 is preferably hydrogen, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, haloalkyl, haloalkenyl, haloalkynyl, optionally substituted arylalkyl. Examples of the preferred C1-6 alkylthio (C1-4 alkyl being especially preferred), C2-6 alkenylthio or C2-6 alkynylthio groups are methylthio, ethylthio, n-propylthio, iso-propylthio, n-butylthio, iso-butylthio, sec-butylthio, t-butylthio, allylthio, but-3-enylthio, 3-methylbut-3-enylthio and propargylthio. Examples of the preferred C1-6 haloalkylthio (C1-4 alkyl being especially preferred), C2-6 haloalkenylthio or C2-6 haloalkynylthio groups are fluoromethylthio, difluoromethylthio, trifluoromethylthio, trifluoromethylthio, 2-fluoroethylthio, 2,2,2-trifluoroethylthio, 3-fluoro-n-propylthio, pentafluoroethylthio, 2-chloroprop-2-enylthio, 3,3-dichloroprop-2-enylthio, 3,4,4-trifluorobut-3-enylthio, 4-fluorobut-3-enylthio, 4,4-difluorobut-3-enylthio and 3-methyl-4,4-difluorobut-3-enylthio. An example of the preferred C6-10 arylthio and C6-10 aryl-C1-2alkylthio groups is 3-trifluoromethylbenzylthio.

When any one of R1 to R8 is the group -SOR9, it is preferably an alkanesulfinyl, alkenylsulfinyl or alkynylsulfinyl group, for example methanesulfinyl or ethanesulfinyl; or a haloalkanesulfinyl, haloalkenylsulfinyl or haloalkynylsulfinyl group, for example trifluoromethanesulfinyl. In another preferred embodiment -SOR9 is preferably -SOF, -SOBr or -SOCl.

When any one of R1 to R8 is the group -SO2R9, it is preferably an alkanesulfonyl, alkenylsulfonyl, alkynylsulfonyl, a haloalkanesulfonyl, haloalkenylsulfonyl, haloalkynylsulfonyl group; or an optionally substituted benzenesulfonyl group. The benzenesulfonyl group may comprise one or more substituents chosen from halogen, for example, chlorine, fluorine and

bromine; alkyl, for example, methyl and ethyl; alkoxy, for example, methoxy and ethoxy; haloalkyl, for example, chloromethyl, fluoromethyl, trifluoromethyl and 2,2,2-trifluoroethyl; haloalkoxy such as trifluoromethoxy and 2,2,2-trifluoroethoxy; hydroxy; cyano and nitro. Examples of such groups are methanesulfonyl, ethanesulfonyl, trifluoromethanesulfonyl, and 4-methylbenzenesulfonyl. In another preferred embodiment -SO2R9 is preferably -SO2F, -SO2Br or -SO2Cl.

It will thus be appreciated that the R group of formula (II) to (XXIV) can comprise more than one -S(O)nCH2CH2C(CH3)=CF2 group. Preferably the R group contains one or two such substituents.

When any one of R1 to R8 is the group -OSO2R9, it is preferably an alkanesulfonyloxy group or an optionally substituted benzenesulfonyloxy group. The benzenesulfonyl may be substituted with one or more substituents chosen from halogen, for example, chlorine, fluorine and bromine; alkyl, for example, methyl and ethyl; alkoxy, for example, methoxy and ethoxy; haloalkyl, for example, chloromethyl, fluoromethyl, trifluoromethyl and 2,2,2-trifluoroethyl; haloalkoxy, for example, trifluoromethoxy and 2,2,2-trifluoroethoxy; hydroxy; cyano; and nitro.

When any one of R1 to R8 is the group -SO2NR9R10, it is preferably -SO2NH2; an alkylaminosulfonyl group, for example, -SO2NHCH3 and -SO2NHC2H5; or a dialkylaminosulfonyl group, for example, -SO2N(CH3)2 and -SO2N(C2H5)2.

When any one of R1 to R8 is the group -CSNR9R10 it is preferably -CSNH2, -CSNHCH3 or -CSN(CH3)2.

When any one of R1 to R8 is the group -SiR9R10R11, it is preferably a trialkylsilyl group, for example, trimethylsilyl and triethylsilyl.

When any one of R1 to R8 is the group -OCH2CO2R9, it is preferably an alkoxycarbonylmethoxy group, for example, methoxycarbonylmethoxy and ethoxycarbonylmethoxy.

When any one of R1 to R8 is the group -OCH2CH2CO2R9, it is preferably a alkoxycarbonylethoxy group, for example, methoxycarbonylethoxy and ethoxycarbonylethoxy.

When any one of R1 to R8 is the group -CONR9SO2R10, it is preferably an N-alkanesulfonylcarboxamido group or an N- alkyl-N-alkanesulfonylcarboxamido group, for example, N-(methanesulfonyl)-carboxamido and N-methyl-N-(methanesulfonyl)carboxamido.

When any one or more of R1 to R8 is the group -alkylCONR9SO2R10. R9 and R10 are preferably alkyl groups, for example, ethyl and methyl.

When any one of R1 to R8 is -NHCONR9R10, R9 and R10 are preferably alkyl groups, for example, ethyl and methyl.

When any one of R1 to R8 is -NHCSNR9R9, R9 and R10 are preferably alkyl groups, for example, ethyl and methyl.

When an adjacent pair of R1, R2, R3, R4, R5, R6, R7 and R8 taken together form a fused 5- or 6-membered carbocyclic or heterocyclic ring, preferably containing two oxygen atoms, the pair of substituents taken together is preferably -(CH2)3-, -(CH2)4-, -CH=CH-CH=CH-, -O-CH2-O-, optionally substituted with one or two halogen atoms or methyl groups, for example -O-CHF-O- or -O-CF2-O-, -O-CH(CH3)-O-, -O-C(CH3)2-O- or -O-(CH2)2-O-.

According to an especially preferred embodiment of the present invention R1 (when attached to a carbon atom) to R8 are each independently hydrogen; nitro; halogen; cyano; -CH=NOH; C1-4 alkyl; C1-4 haloalkyl; C1-4 alkenyl; C1-4 haloalkenyl; cyclopropyl; hydroxy; C1-4 alkoxy; C2-4 alkoxyalkyl; -COOH; C2-4 alkoxycarbonyl; C2-4 haloalkenyloxycarbonyl; -CONH2; mono or di-C1-2 alkylaminocarbonyl; C2-4 alkanecarbonyl; -CONHSO2 C1-4 alkyl, preferably -CONHSO2CH3; phenyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl, C1-4 alkoxy or aminosulfonyl; benzyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl or C1-4 alkoxy; phenoxy optionally mono- or di- substituted with groups independently chosen from halogen, cyano, C1-4 alkyl or C1-4 alkoxy; amino optionally mono- or disubstituted with C1-4 alkyl groups; -SH; C1-4 alkylthio; benzylthio optionally mono- or disubstituted with groups independently chosen from halogen or C1-4 haloalkyl; C1-4 alkenylthio; C2-4 haloalkenylthio; a second S(O)nCH2CH2CH=CF2 group; C1-4 alkanesulfonyl; C1-4 haloalkanesulfonyl; fluorosulfonyl; mono- or di- C1-4 alkylsulfamoyl; a 5 or 6 membered heteroaryl group, for example, furyl, pyrazinyl, pyridinyl or thienyl, optionally substituted with halogen; or any adjacent pair forms a fused 5- or 6- carbocyclic or heterocyclic ring; and

R1 (when attached to a nitrogen atom) is hydrogen; nitro; cyano; -CH=NOH; C1-4 alkyl; C1-4 haloalkyl; cyclopropyl; hydroxy; -COOH; C2-4 alkoxycarbonyl; C2-4 haloalkenyloxycarbonyl; -CONH2; mono or di-C1-2 alkylaminocarbonyl; C2-4 alkanecarbonyl; -CONHSO2 C1-4 alkyl, preferably -CONHSO2CH3; phenyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl, C1-4 alkoxy or aminosulfonyl; benzyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl or C1-4 alkoxy; phenoxy optionally mono- or di- substituted with groups

independently chosen from halogen, cyano, C1-4 alkyl or C1-4 alkoxy; amino optionally monoor di-substituted with C1-4 alkyl groups; -SH; C1-4 alkylthio; benzylthio optionally mono- or disubstituted with groups independently chosen from halogen or C1-4 haloalkyl; C1-4 alkenylthio:
C2-4 haloalkenylthio; a second S(O)nCH2CH2C(CH3)=CF2 group; C1-4 alkanesulfonyl; C1-4
haloalkanesulfonyl; fluorosulfonyl; mono- or di- C1-4 alkylsulfamoyl; a 5 or 6 membered
heteroaryl group, for example, furyl, pyrazinyl, pyridinyl or thienyl, optionally substituted with
halogen.

The following Tables give examples of compounds according to the invention. Examples of compounds of Formula (II) according to the invention are set out in Table II.

TABLE II

No.	R2	R3	R4	R5
II.1	2-SCH2CH2C(CH3)CF2	3-H	4-H	5-H
II.2	2-SOCH2CH2C(CH3)CF2	3-Н	4-H	5-H
II.3	2-SO2CH2CH2C(CH3)CF2	3-H	4-H	5-H
II.4	2-SCH2CH2C(CH3)CF2	3-Н	4-H	5-CH3
11.5	2-SOCH2CH2C(CH3)CF2	3-H	4-H	5-CH3
II.6	2-SO2CH2CH2C(CH3)CF2	3-H	4-H	5-CH3
II.7	2-CH3	3-SCH2CH2C(CH3)CF2	4-H	5-H
II.8	2-CH3	3-SOCH2CH2C(CH3)CF2	4-H	5-H
11.9	2-CH3	3-SO2CH2CH2C(CH3)CF2	4-H	5-H

Examples of compounds of Formula (III) according to the invention are set out in Table III.

TABLE III

No.	R2	R3	R4	R5
111.1	2-SCH2CH2C(CH3)CF2	3-H	4-H	5-H
111.2	2-SOCH2CH2C(CH3)CF2	3-H	4-H	5-H

	2-SO2CH2CH2C(CH3)CF2	3-H	4-H	5-H
•			4-H	5-CHO
III.4	2-SCH2CH2C(CH3)CF2	3-H	•	z CUIOU
III.5	2-SCH2CH2C(CH3)CF2	3-H	4-H	5-CH2OH
		3-H	4-H	(E) 5-CH=NOH
III.6	2-SCH2CH2C(CH3)CF2		4-H	(Z) 5-CH=NOH
111.7	2-SCH2CH2C(CH3)CF2	3-H	4-n	
111.8	2-SCH2CH2C(CH3)CF2	3-H	4-H	5-CN
•		3-H	4-H	5-COCH3
<b>III.9</b>	2-SCH2CH2C(CH3)CF2	<b>5</b> 44	-CH=CH-CH=CH	, <u></u>
III.10	2-SCH2CH2C(CH3)CF2	3-H		
	2-SOCH2CH2C(CH3)CF2	3-H	-CH=CH-CH=CH	[ <b>-</b>
		2 11	-CH=CH-CH=CH	<b>I-</b>
III.12	2-SO2CH2CH2C(CH3)CF2	2-11		

Examples of compounds of Formula (IV) according to the invention are set out in Table IV.

#### TABLE IV

No. IV.1 IV.2 IV.3	R3 3-C6H5 3-C6H5	R4 4-H 4-H	R5 5-SCH2CH2C(CH3)CF2 5-SOCH2CH2C(CH3)CF2 5-SO2CH2CH2C(CH3)CF2
IV.4 IV.5 IV.6 IV.7 IV.8 IV.9 IV.10 IV.11	3-CN 3-CI 3-CF3 3-CH3 3-CH3 3-CH3 3-H 3-H	4-H 4-H 4-CONH2 4-COOCH2CH3 4-COOH 4-H 4-Cl 4-CN 4-CN	5-SCH2CH2C(CH3)CF2
IV.14 IV.15	3-H	4-CN 4-CF3	5-SO2CH2CH2C(CH3)CF2 5-SCH2CH2C(CH3)CF2

IV.16	3-Н	4-H	5-SCH2CH2C(CH3)CF2
IV.17	3-Н	4-NO2	5-SCH2CH2C(CH3)CF2
IV.18	3-H	4-SCH2CH2C(CH3)CF2	5-CN
IV.19	3-H	4-SCH2CH2C(CH3)CF2	5-CF3
IV.20	3-SCH2CH2C(CH3)CF2	4-H	5-Cl
IV.21	3-SCH2CH2C(CH3)CF2	4-Cl	5-H
IV.22	3-SO2CH2CH2C(CH3)CF2	4-CN	5-SO2CH2CH2C(CH3)CF2
IV.23	3-(5-Cl-Fur-2-yl)	4-H	5-SCH2CH2C(CH3)CF2
IV.24	3-(5-C1-Fur-2-yl)	4-H	5-SO2CH2CH2C(CH3)CF2
IV.25	3-(Thien-2-yl)	4-H	5-SCH2CH2C(CH3)CF2
IV.26	3-(Thien-2-yl)	4-H	5-SO2CH2CH2C(CH3)CF2

Examples of compounds of Formula (V) according to the invention are set out in Table V.

#### TABLE V

No.	R3	· F	R4	R5	
V.1	3-CF3	. 4	-Н	5-SC	CH2CH2C(CH3)CF2
V.2	3-Cl	1	-CN	5-SC	CH2CH2C(CH3)CF2
V.3	3-Cl	4	-Н	5-SC	CH2CH2C(CH3)CF2
V.4	3-Cl	4	-Н	5-SC	D2CH2CH2C(CH3)CF2
V.5	3-H	4	-CN	5-80	CH2CH2C(CH3)CF2
V.6	3-H	4	-CN	5-SC	D2CH2CH2C(CH3)CF2
V.7	3-H	4-S0	CH2CH2C(CH3)CF2		5-CF3
V.8	3-H	4-50	OCH2CH2C(CH3)CF2		5-CF3
V.9	3-H	4-80	CH2CH2C(CH3)CF2		F-CN
V.10	3-NO2	4-H			5-SCH2CH2C(CH3)CF2
V.11	3-SCH2CH2C(CH3)CF2		4-Cl		5-H
V.12	3-SCH2CH2C(CH3)CF2		4-CN		5-SCH2CH2C(CH3)CF2
V.13	3-SO2CH2CH2C(CH3)C	F2	4-C.N		5-SOCH2CH2C(CH3)CF2
V.14	3-SOCH2CH2C(CH3)CF	:2	4-CN		5-SO2CH2CH2C(CH3)CF2

V.15	3-SO2CH2CH2C(CH3)CF2	4-CN	5-SO2CH2CH2C(CH3)CF2
V.16	3-SCH2CH2C(CH3)CF2	4-H	5-Cl

Examples of compounds of Formula (VI) according to the invention are set out in Table VI.

#### TABLE VI

No.	R2	R4	R5
VI.1	2-SCH2CH2C(CH3)CF2	4-H	5-H
VI.2	2-SOCH2CH2C(CH3)CF2	4-H	5-H
VI.3	2-SO2CH2CH2C(CH3)CF2	4-H	5-H
VI.4	2-SCH2CH2C(CH3)CF2	4-CF3	5-H
VI.5	2-SO2CH2CH2C(CH3)CF2	4-CF3	5-H
VI.6	2-SCH2CH2C(CH3)CF2	4-CH3	5-H
VI.7	2-SCH2CH2C(CH3)CF2	4-CN	5-H
VI.8	2-SCH2CH2C(CH3)CF2	4-CONH2	5-H
VI.9	2-SCH2CH2C(CH3)CF2	4-COOCH2CH3	5-H
VI.10	2-SO2CH2CH2C(CH3)CF2	4-COOCH2CH3	5-H
VI.11	2-SCH2CH2C(CH3)CF2	4-COOH	5-H
VI.12	2-SO2CH2CH2C(CH3)CF2	4-H	5-Br
VI.13	2-SCH2CH2C(CH3)CF2	4-H	5-Cl
VI.14	2-SO2CH2CH2CiCH3)CF2	4-H	5-Cl
VI.15	2-SCH2CH2C(CH3)CF2	4-CH3	5-CI
VI.16	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-C1
VI.17	2-SCH2CH2C(CH3)CF2	4-H	5-F
VI.18	2-SCH2CH2C(CH3)CF2	4-H	5-C6H5
VI.19	2-SOCH2CH2C(CH3)CF2	4-H	5-C6H5
VI.20	2-SO2CH2CH2C(CH3)CF2	4-H	5-C6H5
VI.21	2-SCH2CH2C(CH3)CF2	4-H	5-CF3
VI.22	2-SCH2CH2C(CH3)CF2	4-H	5-CN
VI.23	2-SOCH2CH2C(CH3)CF2	4-H	5-CN

VI.24	2-SO2CH2CH2C(CH3)CF2	4-H	5-CN
VI.25	2-SCH2CH2C(CH3)CF2	4-CH3	5-CN
VI.26	2-SOCH2CH2C(CH3)CF2	4-CH3	5-CN
VI.27	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-CN
VI.28	2-SCH2CH2C(CH3)CF2	4-H	5-COOCH2CH3
VI.29	2-SOCH2CH2C(CH3)CF2	4-H	5-COOCH2CH3
VI.30	2-SO2CH2CH2C(CH3)CF2	4-H	5-COOCH2CH3
VI.31	2-SCH2CH2C(CH3)CF2	4-CF3	5-COOCH2CH3
VI.32	2-SCH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VI.33	2-SOCH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VI.34	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VI.35	2-SCH2CH2C(CH3)CF2	4-H	5-COOH
VI.36	2-SCH2CH2C(CH3)CF2	4-CF3	5-COOH
VI.37	2-SCH2CH2C(CH3)CF2	4-CH3	5-COOH
VI.38	2-SCH2CH2C(CH3)CF2	4-CH3	5-CONHSO2CH3
VI.39	2-SCH2CH2C(CH3)CF2	4-H	5-CONH2
VI.40	2-SCH2CH2C(CH3)CF2	4-CH3	5-CONH2
VI.41	2-SOCH2CH2C(CH3 CF2	4-CH3	5-CONH2
VI.42	2-SCH2CH2C(CH3)CF2	4-H	5-NO2
VI.43	2-SOCH2CH2C(CH3)CF2	4-H	5-NO2
VI.44	2-SO2CH2CH2C(CH3)CF2	4-H	5-NO2
VI,45	2-SCH2CH2C(CH3)CF2	4-H	5-SO2F
V1.46	2-SOCH2CH2C(CH3)CF2	4-H	5-SO2F
VI.47	2-SCH2CH2C(CH3)CF2	4-H	5-SO2NH2
VI.48	2-SO2CH2CH2C(CH3)CF2	4-H	5-SO2NH2
VI.49	2-H 4-	SCH2CH2C(CH3)CF2	5-Br
VI.50	2-H 4-	SCH2CH2C(CH3)CF2	5-C6H5
VI.51	2-H 4-	SOCH2CH2C(CH3)CF2	5-C6H5
VI.52	2-H 4-	SCH2CH2C(CH3)CF2	5-CF3
V1.53	2-H 4-	SOCH2CH2C(CH3)CF2	5-CF3
VI.54	2-H 4-	SCH2CH2C(CH3)CF2	5-Cl
VI.55	2-H 4-	SOCH2CH2C(CH3)CF2	5-Cl

VI.56	2-H	4-SO2CH2CH2C(CH3)CF2	5-Cl
VI.57	2-H	4-SCH2CH2C(CH3)CF2	5-CN
VI.58	2-CH3	4-SCH2CH2C(CH3)CF2	5-CN
VI.59	2-CH3	4-SOCH2CH2C(CH3)CF2	5-CN
VI.60	2-CH3	4-SO2CH2CH2C(CH3)CF2	5-CN
VI.61	2-H	4-SCH2CH2C(CH3)CF2	5-CONH2
	2-CH3	4-SCH2CH2C(CH3)CF2	5-CONH2
VI.63	2-Н	4-SCH2CH2C(CH3)CF2	5-COOCH2CH3
VI.64	2-CH3	4-SCH2CH2C(CH3)CF2	5-COOCH3
VI.65	2-CH3	4-SO2CH2CH2C(CH3)CF2	5-COOCH3
VI.66	2-Н	4-SCH2CH2C(CH3)CF2	5-COOH
VI.67	2-Н	4-SCH2CH2C(CH3)CF2	5-F
VI.68	2-H	4-SCH2CH2C(CH3)CF2	5-H
VI.69	2-H	4-SOCH2CH2C(CH3)CF2	5-H
¥1.70	2-H	4-SO2CH2CH2C(CH3)CF2	5-H
VI.71	2-H	4-SCH2CH2C(CH3)CF2	5-NO2
VI.72	2-H	4-SCH2CH2C(CH3)CF2	5-SO2F
<b>V</b> I.73	2-H	4-SCH2CH2C(CH3)CF2	5-SO2NH2
VI.74	2-H	4-Br	5-SCH2CH2C(CH3)CF2
VI.75	2-H	4-C6H5	5-SCH2CH2C(CH3)CF2
VI.76	2-H	4-CF3	5-SCH2CH2C(CH3)CF2
VI.77	2-H	4-CF3	5-SO2CH2CH2C(CH3)CF2
VI.78	2-H	4-Cl	5-SCH2CH2C(CH3)CF2
VI.79	2-Н	4-CN	5-SCH2CH2C(CH3)CF2
VI.80	2-H	4-CN	5-SOCH2CH2C(CH3)CF2
VI.81	2-H	4-CN	5-SO2CH2CH2C(CH3)CF2
VI.82	2-CH3	4-CN	5-SCH2CH2C(CH3)CF2
VI.83	2-H	4-CONH2	5-SCH2CH2C(CH3)CF2
VI.84	2-H	4-CONH2	5-SOCH2CH2C(CH3)CF2
V1.85	2-H	4-CONH2	5-SO2CH2CH2C(CH3)CF2
VI.86	2-CH3	4-CONH2	5-SCH2CH2C(CH3)CF2
VI.87	2-H	4-COOCH2CH3	5-SCH2CH2C(CH3)CF2

VI.88	2-H	4-COOCH2CH3	5-SOCH2CH2C(CH3)CF2
VI.89	2-H	4-COOCH2CH3	5-SO2CH2CH2C(CH3)CF2
VI.90	2-CH3	4-COOCH3	5-SCH2CH2C(CH3)CF2
VI.91	2-H	4-COOH	5-SCH2CH2C(CH3)CF2
VI.92	2-H	4-F	5-SCH2CH2C(CH3)CF2
VI.93	2-H	4-H	5-SCH2CH2C(CH3)CF2
VI.94	2-H	4-H	5-SOCH2CH2C(CH3)CF2
VI.95	2-H	4-H	5-SO2CH2CH2C(CH3)CF2
VI.96	2-H	4-NO2	5-SCH2CH2C(CH3)CF2
VI.97	2-H	4-NO2	5-SOCH2CH2C(CH3)CF2
VI.98	2-H	4-SO2F	5-SCH2CH2C(CH3)CF2
VI.99	2-H	4-SO2NH2	5-SCH2CH2C(CH3)CF2
VI.100	2-Br	4-H	5-SCH2CH2C(CH3)CF2
VI.101	2-C6H5	4-H	5-SCH2CH2C(CH3)CF2
VI.102	2-C6H5	4-H	5-SOCH2CH2C(CH3)CF2
VI.103	2-C6H5	4-H	5-SO2CH2CH2C(CH3)CF2
VI.104	2-CF3	4-H	5-SCH2CH2C(CH3)CF2
VI.105	2-CF3	4-H	5-SO2CH2CH2C(CH3)CF2
VI.106	2-Cl	4-H	5-SCH2CH2C(CH3)CF2
VI.107	2-CN	4-H	5-SCH2CH2C(CH3)CF2
VI.108	2-CN	4-CH3	5-SCH2CH2C(CH3)CF2
VI.109	2-CONH2	4-H	5-SCH2CH2C(CH3)CF2
VI.110	2-CONH2	4-H	5-SOCH2CH2C(CH3)CF2
VI.111	2-CONH2	4-H	5-SO2CH2CH2C(CH3)CF2
VI.112	2-CONH2	4-CH3	5-SO2CH2CH2C(CH3)CF2
VI.113	2-COOCH2CH3	4-H	5-SCH2CH2C(CH3)CF2
VI.114	2-COOCH3	4-CH3	5-SCH2CH2C(CH3)CF2
VI.115	2-COOH	4-H	5-SCH2CH2C(CH3)CF2
VI.116	2-F	4-H	5-SCH2CH2C(CH3)CF2
VI.117	2-F	4-H	5-SOCH2CH2C(CH3)CF2.
VI.118	2-NO2	4-H	5-SCH2CH2C(CH3)CF2
VI.119	2-SO2F	4-H	5-SCH2CH2C(CH3)CF2
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VI 120	2-SO2NH2	4-H	5-SCH2CH2C(CH3)CF2
-	2-SCH2CH2C(CH3)CF2	4-C6H5	5-H
	2-SOCH2CH2C(CH3)CF2	4-C6H5	5-H
. •	2-SO2CH2CH2C(CH3)CF2		5-H
VI.123	2-SO2CH2CH2C(CH3)Cr2	4-00115	-

Examples of compounds of Formula (VII) according to the invention are set out in Table VII.

#### TABLE VII

No.	R2	R4	R5
VII.1	2-SCH2CH2C(CH3)CF2	4-H	5-H
VII.2	2-SOCH2CH2C(CH3)CF2	4-H	5-H
VII.3	2-SO2CH2CH2C(CH3)CF2	4-H	5-H
VII.4	2-SCH2CH2C(CH3)CF2	4-CF3	5-H
VII.5	2-SO2CH2CH2C(CH3)CF2	4-CF3	5-H
VII.6	2-SCH2CH2C(CH3)CF2	4-CN	5-H
VII.7	2-SCH2CH2C(CH3)CF2	4-CONH2	5-H
VII.8	2-SCH2CH2C(CH3)CF2	4-COOCH2CH3	5-H
VII.9	2-SO2CH2CH2C(CH3)CF2	4-COOCH2CH3	5-H
VII.10	2-SCH2CH2C(CH3)CF2	4-COOH	5-H
VII.11	2-SCH2CH2C(CH3)CF2	4-COOCH2CH3	5-Br
VII.12	2-SO2CH2CH2C(CH3)CF2	4-COOCH2CH3	5-Br
VII.13	2-SCH2CH2C(CH3)CF2	4-COOH	5-Br
VII.14	2-SCH2CH2C(CH3)CF2	4-H	5-Br
VII.15	2-SOCH2CH2C(CH3)CF2	4-H	5-Br
VII.16	2-SO2CH2CH2C(CH3)CF3	2 4-H	5-Br
VII.17	2-SCH2CH2C(CH3)CF2	4-H	5-C6H5
VII.18	2-SOCH2CH2C(CH3)CF2	4-H	5-C6H5
VII.19	2-SO2CH2CH2C(CH3)CF	2 4-H	5-C6H5
VII.20		4-H	5-CF3
VII.21		4-H	5-CH3
VII.22	C.	4-H	5-CH3

VII.23	2-SO2CH2CH2C(CH3)CF2	4-H	5-CH3
VII.24	2-SCH2CH2C(CH3)CF2	4-H	5-Cl
VII.25	2-SOCH2CH2C(CH3)CF2	4-H	5-Cl·
VII.26	2-SO2CH2CH2C(CH3)CF2	4-H	5-Cl
VII.27	2-SCH2CH2C(CH3)CF2	4-CH3	5-Cl
VII.28	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-Cl
VII.29	2-SCH2CH2C(CH3)CF2	4-H	5-CN
VII.30	2-SOCH2CH2C(CH3)CF2	4-H ·	5-CN
VII.31	2-SO2CH2CH2C(CH3)CF2	4-H	5-CN
VII.32	2-SCH2CH2C(CH3)CF2	4-CH3	5-CN
VII.33	2-SOCH2CH2C(CH3)CF2	4-CH3	5-CN
VII.34	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-CN
VII.35	2-SCH2CH2C(CH3)CF2	4-H	5-CONH2
VII.36	2-SCH2CH2C(CH3)CF2	4-CH3	5-CONH2
VII.37	2-SOCH2CH2C(CH3)CF2	4-CH3	5-CONH2
VII.38	2-SCH2CH2C(CH3)CF2	4-H	5-COOCH2CH3
VII.39	2-SOCH2CH2C(CH3)CF2	4-H ·	5-COOCH2CH3
VII.40	2-SO2CH2CH2C(CH3)CF2	4-H	5-COOCH2CH3
VII.41	2-SCH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VII.42	2-SOCH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VII.43	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-COOCH3
VII.44	2-SCH2CH2C(CH3)CF2	4-H	5-COOH
VII.45	2-SCH2CH2C(CH3)CF2	4-CH3	5-COOH
VII.46	2-SCH2CH2C(CH3)CF2	4-H	5-F
VII.47	2-SCH2CH2C(CH3)CF2	4-H	5-NO2
VII.48	2-SOCH2CH2C(CH3)CF2	4-H	5-NO2
VII.49	2-SO2CH2CH2C(CH3)CF2	4-H	5-NO2
VII.50	2-SCH2CH2C(CH3)CF2	4-H	5-SO2F
VII.51	2-SOCH2CH2C(CH3)CF2	4-H	5-SO2F
VII.52	2-SCH2CH2C(CH3)CF2	4-CH3	5-SO2F
VII.53	2-SO2CH2CH2C(CH3)CF2	4-CH3	5-SO2F
VII.54	2-SCH2CH2C(CH3)CF2	4-H	5-SO2NH2

VII.55	2-SO2CH2CH2C(CH3)CF2	4-H	5-SO2NH2
VII.56		4-CH3	5-SO2N(CH2CH3)2
VII.57		4-SCH2CH2C(CH3)CF2	5-H
VII.58		4-SOCH2CH2C(CH3)CF2	5-H
VII.59		4-SO2CH2CH2C(CH3)CF	2 5-H
VII.60		4-SCH2CH2C(CH3)CF2	5-Br
VII.61		4-SCH2CH2C(CH3)CF2	5-C6H5
VII.62		4-SOCH2CH2C(CH3)CF2	5-C6H5
VII.63		4-SCH2CH2C(CH3)CF2	5-CF3
VII.64		4-SOCH2CH2C(CH3)CF2	5-CF3
VII.65	. •	4-SCH2CH2C(CH3)CF2	5-Cl
VII.66		4-SOCH2CH2C(CH3)CF2	5-Cl
VII.67		4-SO2CH2CH2C(CH3)CF	52 5-Cl
VII.68	•	4-SCH2CH2C(CH3)CF2	5-CN
VII.69		4-SCH2CH2C(CH3)CF2	5-CN
VII.70	•	4-SOCH2CH2C(CH3)CF2	2 5-CN
VII.71		4-SO2CH2CH2C(CH3)CF	5-CN
VII.72		4-SCH2CH2C(CH3)CF2	5-CONH2
VII.73	2-CH3	4-SCH2CH2C(CH3)CF2	5-CONH2
VII.74	2-H	4-SCH2CH2C(CH3)CF2	5-COOCH2CH3
	2-CH3	4-SCH2CH2C(CH3)CF2	5-COOCH3
VII.76		4-SO2CH2CH2C(CH3)C	F2 5-COOCH3
VII.77	•	4-SCH2CH2C(CH3)CF2	5-COOH
VII.78	2-H	4-SCH2CH2C(CH3)CF2	5-F
VII.79	2-H	4-SCH2CH2C(CH3)CF2	5-NO2
VII.80	2-H	4-SCH2CH2C(CH3)CF2	5-SO2F
VII.81	2-H	4-SCH2CH2C(CH3)CF2	5-SO2NH2
VII.82	2-H	4-H	5-SCH2CH2C(CH3)CF2
VII.83		4-H	5-SOCH2CH2C(CH3)CF2
VII.84		4-H	5-SO2CH2CH2C(CH3)CF2
VII.85		4-Br	5-SCH2CH2C(CH3)CF2
VII.86	5 2-H	4-C6H5	5-SCH2CH2C(CH3)CF2

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VII.87 2-H		4-CF3	5-SCH2CH2C(CH3)CF2
VII.88 2-H		4-CF3	5-SO2CH2CH2C(CH3)CF2
VII.89 2-H		4-Cl	5-SCH2CH2C(CH3)CF2
VII.90 2-H		4-CN	5-SCH2CH2C(CH3)CF2
VII.91 2-H		4-CN	5-SOCH2CH2C(CH3)CF2
VII.92 2-H		4-CN	5-SO2CH2CH2C(CH3)CF2
VII.93 2-CI	Н3	4-CN	5-SCH2CH2C(CH3)CF2
VII.94 2-H		4-CONH2	5-SCH2CH2C(CH3)CF2
VII 95 2-H		4-CONH2	5-SOCH2CH2C(CH3)CF2
VII.96 2-H		4-CONH2	5-SO2CH2CH2C(CH3)CF2
VII.97 2-CI	H3	4-CONH2	5-SCH2CH2C(CH3)CF2
VII.98 2-H		4-COOCH2CH3	5-SCH2CH2C(CH3)CF2
VII.99 2-H		4-COOCH2CH3	5-SOCH2CH2C(CH3)CF2
VII.100 2-H		4-COOCH2CH3	5-SO2CH2CH2C(CH3)CF2
VII.101 2-CH	13	4-COOCH3	5-SCH2CH2C(CH3)CF2
VII.102 2-H	·	4-COOH	5-SCH2CH2C(CH3)CF2
VII.103 2-H		4-F	5-SCH2CH2C(CH3)CF2
VII.104 2-H		4-NO2	5-SCH2CH2C(CH3)CF2
VII.105 2-H		4-NO2	5-SOCH2CH2C(CH3)CF2
VII.106 2-H		4-SO2F	5-SCH2CH2C(CH3)CF2
VII.107 2-H		4-SO2NH2	5-SCH2CH2C(CH3)CF2
VII.108 2-Br		4-H	5-SCH2CH2C(CH3)CF2
VII.109 2-C6	H5	4-H	5-SCH2CH2C(CH3)CF2
VII.110 2-C6	H5	4-H	5-SOCH2CH2C(CH3)CF2
VII.111 2-C6	H5	4-H	5-SO2CH2CH2C(CH3)CF2
VII.112 2-CF	3	4-H	5-SCH2CH2C(CH3)CF2
VII.113 2-CF	3	4-H	5-SO2CH2CH2C(CH3)CF2
VII.114 2-Cl		4-H	5-SCH2CH2C(CH3)CF2
VII.115 2-Cl		4-H	5-SOCH2CH2C(CH3)CF2
VII.116 2-Cl	•	4-H <sub>.</sub>	5-SO2CH2CH2C(CH3)CF2
VII.117 2-CN		4-H	5-SCH2CH2C(CH3)CF2
VII.118 2-CN		4-CH3	5-SCH2CH2C(CH3)CF2

	- 21 -	
		5-SCH2CH2C(CH3)CF2
VII.119 2-CONH2	1-H	
VII.120 2-CONH2	4-H	5-SOCH2CH2C(CH3)CF2
VII.121 2-CONH2	4-H	5-SO2CH2CH2C(CH3)CF2
VII.122 2-CONH2	4-CH3	5-SO2CH2CH2C(CH3)CF2
VII.123 2-COOCH2CH3	4-H	5-SCH2CH2C(CH3)CF2
VII.124 2-COOCH3	4-CH3	5-SCH2CH2C(CH3)CF2
VII.125 2-COOH	4-H	5-SCH2CH2C(CH3)CF2
VII.126 2-F	4-H	5-SCH2CH2C(CH3)CF2
VII.127 2-F	4-H	5-SOCH2CH2C(CH3)CF2
VII.128 2-NH2	4-H	5-SCH2CH2C(CH3)CF2
VII.129 2-NO2	4-H	5-SCH2CH2C(CH3)CF2
VII.130 2-O(4-CN-C6H4)	4-H	5-SCH2CH2C(CH3)CF2
VII.13. 2-SO2F	4-H	5-SCH2CH2C(CH3)CF2
VII.132 2-SO2NH2	4-H	5-SCH2CH2C(CH3)CF2
VII.133 2-S-(2)-(5-Cl Thiazole)	4-H	5-SCH2CH2C(CH3)CF2
VII.134 2-SCH2CH2C(CH3)CF2	4-dihydro	5-dihydro
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Examples of compounds of Formula (VIII) according to the invention are set out in Table VIII.

# TABLE VIII

Ž	≅	182	R4	RS
VIII.I	. =	2-SCH2CH2C(CH3)CF2	4-11	5-11
VIII.2		2-SO2CH2CH2C(CH3)CF2	4-H	11·5
VIII.3	1-(16115	2-SC112C112C(C113)CF2	4-11	5-11
VIII.4	1-C6[[5	2-SO2CH2CH2C(CH3)CF2	4-H	5-11
VIII.5	1-CH3	2-SCI12C112C(C113)CF2	4-11	5-11
VIII.6	LCIB	2-SOCI12C112C(C113)CF2	4-11	5-11
VIII.7	I-CH3	2-SO2CH2CH2C(CH3)CF2	4-11	2-11
VIII.8	1-CH2CH2CHCF2	2-SCH2CH2C(CH3)CF2	4-11	S-11
VIII.9	I CH2CH2CHCF2	2-SO2CH2CH2C(CH3)CF2	4-11	5-11
VIII.10	I-CHDCHB	2-SC112C112C(C113)CF2	4-11	S-11
VIII.II	I-CILICHI3	2-S02C112C112C(C113)CF2	4-H	5-11
VIII.12	, c 112CH2CH3	2-SC112C112C(C113)CF2	4-11	5-11
VIII.13	VIII.13 1-CH2CH2CH3	2-S02CH2CH2C(CH3)CF2	4-11	5-11
VIII.14	1-CH(CH3)2	2-SCH2CH2C(CH3)CF2	4-11	11-5
VIII.15	1-CH(CH3)2	2-SO2CH2CH2C(CH3)CF2	4-11	11-5
VIII.16	VIII.16 LC(CH3)3	2-SC112C112C(CH3)CF2	4-11	11-5

5-11	5-11	5-11	2-11	5-11	5-11	5-11	2-11	5-Br	5-CF3	5-C113	5-CH3	5-CH3	5-CH3	5-CH3	5-CH3	5-C113	5-CH3	5-CH3	5-CH3	5-CH3
4-11	4-11	4-C6115	4-C6115	4-C6115	4-C6115	4-C6115	4-C6H5	4-H	4-14	4-C112C113	4-C112C113	4-CII3	4-CII3	4-CII3	4-CH3	4-CH3	4-CII3	4-H	4-11	4-11
2-SO2CH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SOC112C112C(C113)CF2	2-SO2CH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-SOC112CH2C(C113)CF2	2-S02CH2CH2C(CH3)CF2	2-S02CH2CH2C(CH3)CF2	2-SCI12C112C(CI13)CF2	2-SCH2CH2C(CH3)CF2	2-SO2CH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-S02CH2CH2C(CH3)CF2	2-SCI12C112C(C113)CF2	2-SO2CH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-S02CH2CH2C(CH3)CF2	2-SCI12C112C(CH3)CF2	2-S02CI12CI12C(CI13)CF2	2-SCH2CH2C(CH3)CF2
1 C(CH3)3	1-SO2CII3	11-1	=	11:1	1-CH3	1 (713)	I CH3	1.CH3	1-CH3	11-1	11:1	==	11-1			VIII.33 1-CH2CH3	1 CH2CH3		1-CH3	1-CH(CH3)2
VIII.17 1																VIII.33	\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.	VIII 35	1.3-1 % III.A	V111.37

VIII.38	I-CH(CH3)2	2-SO2CI12CI12C(CI13)CF2	4-11	5-CH3
VIII.39	I-CH3	2-SCH2CH2C(CH3)CF2	4-11	5-CI
VIII.40	LCIB	2-SO2CH2CH2C(CH3)CF2	4-11	5-CI
VIII.41	I-CH3	2-SCI12CH2C(CI13)CF2	4-11	S-CN
VIII.42	I-CII3	2-SOCI12CI12C(CI13)CF2	4-H	S-CN
VIII.43	1-CH3	2-S02CH2CH2C(CH3)CF2	4-11	5-CN
VIII.44	1-CH3	2-SCI12CH2C(CH3)CF2	4-CII3	5-CN
VIII.45	I-CII3	2-SOCI12C112C(CH3)CF2	4-CH3	S-CN
VIII.46	I-CII3	2-SO2CI12CI12C(CH3)CF2	4-CH3	S-CN
VIII.47	i-CH3	2-SCH2CH2C(CH3)CF2	4-11	5-CONH2
VIII.48	I-CIB	2-SCI12CI12C(CH3)CF2	4-CH3	5-CONII2
VIII.49	I-CII3	2-SOCII2CH2C(CH3)CF2	4-CH3	5-CONI12
VIII.50	1-1	2-SOC112CH2C(CH3)CF2	4-H	5-COOCH2CH3
VIII.51	=	2-SO2C112C112C(C113)CF2	4-11	5-COOCH2CH3
VIII.52	1-CH3	2-SCH2CH2C(CH3)CF2	4-11	5-COOCH2CH3
VIII.53	I-CH3	2-S02CI12CI12C(CI13)CF2	4-11	5-COOCI12CI13
VIII.54	1-CH3	2-SCI12CI12C(CI13)CF2	4-11	5-COOH
VIII.55	1-CH3	2-SCI12CI12C(CI13)CF2	4-CI12CI13	5-COOCH3
VIII.56	1-CH3	2-S02CH2CH2C(CH3)CF2	4-CH2CH3	5-COOCH3
VIII.57	I-CH3	2-SCH2CH2C(CH3)CF2	4-11	5-F
VIII.58		2-SC112C112C(C113)CF2	4-CII3	5-11

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VIII.80	1-C113	2-CH3	4-SCH2CH2C(CH3)CF2	S-CN
VIII.81	1-(113	2-CII3	4-SOCI12C112C(C113)CF2	S-CN
VIII.82	1-CH3	2-CH3	4-SO2CH2CH2C(CH3)CF2	5-CN
VIII.83	I-CIB	2-11	4-SCH2CH2C(CH3)CF2	S-C6115
VIII.8.1	1-C313	2-11	4-SOCH2CH2C(CH3)CF2	5-C6115
VIII.85	1-CH3	2.11	4-SCH2CH2C(CH3)CF2	5-COOCH2CH3
VIII.86	1-CH3	2-CH3	4-SCH2CH2C(CH3)CH2	5-COOCI13
VIII.87	1-CH3	2-C113	4-S02CI12CH2C(CI13)CF2	5-C00CII3
VIII.88	1-C113	2-11	4-SCH2CH2C(CH3)CF2	5-COOH
VIII.89	1.CH3	2-11	4-SCI12CH2C(CI13)CF2	5-CONII2
VIII.90	I-CII3	2-CII3	4-SCH2CH2C(CH3)CF2	5-CONII2
VIII.91	1-CH3	2-11	4-SCH2CH2C(CH3)CF2	5-CI
VIII.92	I-CII3	2-11	4-SOCI12CI12C(CI13)CI <sup>2</sup> 2	5-CI
VIII.93	I-CH3	2.11	4-S02CH2CH2C(CH3)CF2	5-CI
VIII.94	I-CH3	2.11	4-SCI12CI12C(CI13)CF2	5-F
VIII.95	I-CII3	2-11	4-SCH2CH2C(CH3)CF2	5-Br
VIII.96	I-CII3	2.11	4-SCI12CI12C(CI13)CF2	5-SO2NII2
76.11117	I-CH3	2.11	4-SCH2CH2C(CH3)CF2	5-SO2F
VIII.98	1.CH3	2-11	4-SCI12CI12C(CH3)CF2	5-NO2
VIII.99	1-C113	2-11	4-SCI12C112C(C113)CF2	5-CF3
VIII 100 1-C113	I-CIB	2-11	4-SOCI12CI12C(CI13)CF2	5-CF3

5-SCI12CI12C(CI13)CF2	5-SOCII2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CI12C(CI13)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCII2CH2C(CII3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	S SCHOCHOCHOS	2.50.0000000000000000000000000000000000
4-11	4-11	4-11	4-CN	4-CN	4-CN	4-CN	4-C6H5	4-C00CH2CH3	4-COOCH2CH3	4-COOCH2CH3	4-COOCH3	4-COOH	4-CONH2	4-CONH2	4-CONH2	4-CONI12	4-CI	ብ-ት	4-Br		4-S02NH2
2-11	2-11	7-H	2-11	2-11	3 - 3	2-CH3	2-11	2-11	2-H	2-H	2-CI13	2-11	2-11	2-11	2-11	2-CH3	2.11	: : : :	11-7	11-7	2-11
VIII 101 113	VIII.101 1-CH2	VIII.102 1-CH3	VIII.103 1-CH3	VIII.104 FCH3	VIII.105 1 CH3	VIII.107 1-C413	VIII 108 1-CH3	VIII 109 1-C113	VIII 110 1-CH3	VIII 11 1-CH3	VIII 112 1-CH3	VIII 113 1-CH3	VIII.113 1-CH3	VIII.115 1-C113	VIII 116 1-C113	VIII. 17 1 CH3	VIII.11 1-C113	VIII.IIA I-CIIS	VIII.119 1-C113	VIII.120 1-CH3	VIII.121 1-CH3

VIII.122 1-CH3	- <del>.</del>	4-SO2F	5-SCH2CH2C(CH3)CF2
VIII.123 1-CH3	2-11	4-NO2	5-SCH2CH2C(CH3)CF2
VIII.124 1-CH3	2.11	4-NO2	5-SOCH2CH2C(CH3)CH2
VIII.125 1-CH3	2.11	4-CF3	5-SCI12CI12C(CH3)CF2
VIII.126 1-CH3	2.11	4-CF3	5-SO2CH2CH2C(CH3)CF2
VIII.127 1 CH3	2.11	4-H	5-SCH2CH2C(CH3)CH2
VIII.128 1-C113	2-11	4-11	5-SOCH2CH2C(CH3)CF2
VIII.129 1 CH3	2-11	4-11	5-SO2C112C112C(C113)CF2
VIII.130 1-CH3	2-CN	4-11	5-SCH2CH2C(CH3)CF2
VIII.131 LCII3	2-CN	4-CII3	5-SCH2CH2C(CH3)CF2
VIII.132 LCII3	2-(15115	4-11	5-SCH2CH2C(CH3)(TF2
VIII.133 1.CH3	2-C6H5	4-11	5-SOCH2CH2C(CH3)CF2
VIII.134 1-CH3	2-C6115	4-11	5-SO2CH2CH2C(CH3)CF2
VIII.135 1-CH3	2-C00CH2CH3	4-11.	5-SCH2CH2C(CH3)CF2
VIII.136 1-CH3	2-COOCH3	4-CH3	5-SCH2CH2C(CH3)CF2
VIII,137 1-CH3	2 COOH	H-+	5-SCH2CH2C(CH3)CF2
VIII.138 1-CH3	2-CONII2	H-+	5-SCH2CH2C(CH3)CF2
VIII.139 1-CH3	2-CONII2	4-11	5-SOCH2CH2C(CH3)CF2
VIII.140 1-CH3	2-CONI12	4-H	5-SO2CH2CH2CH3)CF2
VIII.141 1-CH3	2-CONI12	4-CH3	5-SO2CH2CH2C(CH3)CF2
VIII.12 1.CH3	2.CI	4-11	5-SC112CH2C(C113)CF2

VIII.143 1-CH3	2-년	4-11	5-SCI12CI12C(CI13)CF2
VIII.144 1 CH3	2-F	4-11	5-SOCH2CI12C(CI13)CF2
VIII.145 1-CH3	2-Br	4-H	5-SCH2CH2C(CH3)CF2
VIII.146 1-CH3	2-S02NI12	4-H	5-SC112C112C(C113)CF2
VIII.147 1-CH3	2-SO2F	4-11	5-SCI12CI12C(CI13)CF2
VIII.148 1 CH3	2-NO2	4-11	5-SCH2CH2C(CH3)CF2
VIII.149 1-C113	2-CI <sup>3</sup>	4-11	5-SCH2CH2C(CH3)CH2
VIII.150 1-CH3	2-CF3	4-11	5-SO2CH2CH2C(CH3)CH2
VIII.151 1-5 linked	2-SCH2CH2C(CH3)CF2	4-H	-CH=CH-CH=CH-
VIII.152 1-5 linked	2-S02CI12CH2C(CH3)CF2	4-H	-CH=CH-CH=CH-
VIII.153 1-CH2CH2CH3	2-SCI12CH2C(CH3)=CF2	4-11	5-11
VIII.154 1-CH2CH2CH3	2-SOCI12CH2C(CH3)=CF2	4-H	5-11
VIII.155 1-CH2CH2CH3	2-SO2CH2CH2C(CH3)=CF2	4-H	5-11

Examples of compounds of Formula (IX) according to the invention are set out in Table IX.

## TABLEIX

R5	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
R4	4-11	4-11
R3	3-11	3.11
RI	1-CH3	1.013
Š	- X	1X.2

1X.3	LCH3	3-11	4-11	5-SO2CH2CH2C(CH3)CF2
t.XI	1-CH3	3-CI	4-11	5-SCH2CH2C(CH3)CF2
1X.5	I-CH3	3-CI	4-11	5-SOCH2CH2C(CH3)CF2
lX.6	1-(3113	3-C1	4-11	5-SO2CH2CH2C(CH3)CF2
1X.7	F.C.113	3-COOC2115	4-11	5-SCH2CH2C(CH3)CF2
×.×.	1-(7113	3-COOC2115	4-11	5-SOCH2CH2C(CH3)CF2
. 6.XI	LCH3	3-C00C2115	4-11	5-SO2CH2CH2C(CH3)CF2
1X.10	1-CH3	3-COOH	4-11	5-SCH2CH2C(CH3)CH2
1X.11	I.CIB	3-C00II	4-11	5-SOC112C112C(C113)C12
IX.12	1-(7113	3-C00II	4-11	5-SO2CH2CH2C(CH3)CF2
IX.13	I-CH3	3-CONII2	4-11	5-SCH2CH2C(CH3)CF2
17.11	1-CH3	3-CONII2	4-1[	5-SOCII2CH2C(CH3)CF2
1X.15	FC13	3-CONI12	4-11	5-SO2CH2CH2C(CH3)CF2
1X.16	F.C113	3-CN	4-11	5-SCH2CH2C(CH3)CF2
IX.17	1-(113	3-CN	4-11	5-SOCH2CH2C(CH3)CF2
IX.18	1 (113	3-CN	4-11	5-SO2CH2CH2CH-CF2
1X.19	1-C113	3-SO2F	4-11	5-SCH2CH2C(CH3)CF2
IX.20	1 (113	3-SO2F	4-11	5-SOCH2CH2CH-CF2
IN.21	LCII3	3-SO2F	4-11	5-SO2CH2CH2C(CH3)CF2
IX.22	1-CH3	3-S02NII2	4-11	5-SCH2CH2C(CH3)CF2
IX.23	1-CIB	3-SO2NI12	4-11	5-SOCH2CH2C(CH3)CF2

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5-SO2CH2CH2C(CH3)CH2	5-SCI12CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-SO2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-S02CI12CH2C(CH3)CF2	5-SCH2CH2C(CH3)CH2	5-SOCH2CH2C(CH3)CF2	5-SO2CH2CI12C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-SO2CH2CI12C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CII3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-SO2C112C112C(C113)CF2	5-SCH2CH2C(CH3)CF2	5-SOCI12CI12C(CI13)CF2
4-11	4-11	4-H	4-H	4-CI	4-CI	4-CI	4-Br	4-Br	4-Br	4-C00C2H5	4-COOC2H5	4-COOC2H5	4-COOCH(CH3)2	4-COOCH(CH3)2	4-COOCH(CH3)2	4-COOH	4-соон	4-C00II	4-CONII2	4-CONII2
3-SO2N112	3-11	3-11	3-11	3-Н	3-11	3-11	3-11	3-11	3-11	3-14	3-11	3-11	3-11	3-11	3-11	3-11	3-11	3-11	3.11	3-11
1-(113	I-CH3	1-CII3	1-CH3	1-CH3	I-CH3	1-CH3	I-CH3	1-CH3	1-CH3	1-C113	1-C113	1-CII3	1-CII3	1-CH3	I-CH3	I-CH3	1-CH3	1-CH3	1-CH3	1-CH3
1X.24	IX.25	1X.26	1X.27	1X 28	1X.29	1X.30	1X.31	IX.32	1X.33	IX.34	1X.35	1X.36	1X.37	1X.38	1X.39	0Y:X1	1X.41	1X.42	IX.43	1X.44

1X.45	1013	3-11	4-CON112	5-SO2CH2CH2C(CH3)CH2
97.XI	1.013	3-11	4.CN	5-SCI12CI12C(CI13)CF2
[X:47	1 (113	3-11	4-CN	5-SOCH2CH2C(CH3)CF?
81°X	I-CH3	3-11	4-CN	5-SO2CH2CH2C(CH3)CF2
6F.XI	I-C113	3.11	4-SO2F	5-SCH2CH2C(CH3)CF2
1X.50	- CH3	3-11	4-S02F	5-SOC112C112C(C113)CF2
12.51	I-CH3	3-11	4-SO2F	5-SO2CH2CH2C(CH3)CF2
1X.52	LCH3	3-11	4-S02NI12	5-SCH2CH2C(CH3)CF2
1X.53	1-CH3	3-11	4-SO2NII2	5-SOCH2CH2C(CH3)CH2
1X.54	1-CII3	3-11	4-SO2NII2	5-SO2CH2CH2C(CH3)CF2
1X 55	1-CH3	3-CH3	4-11	5-SCH2CH2C(CH3)CF2
1X.56	I-CH3	3-C113	4-H	5-SOCH2CH2C(CH3)CF2
IX.57	1.C.113	3-(113	4-11	5-SO2C112C112C(C113)C1 <sup>2</sup> 2
1X.58	I-CH3	3-CH3	4-Cl	5-SCH2CH2C(CH3)CF2
1X.50	1-CH3	3-CH3	4-CI	5-SOCH2CH2C(CH3)CF2
1X.60	1-CH3	3-CH3	4-Cl	5-SO2C112C112C(C113)CF2
13.61	1.CH3	3-CH3	7	5-SCH2CH2C(CH3)CF2
1X.62	1-CH3	3-CH3	4-1	5-SOCII2CH2C(CH3)CF2
1X.63	1-CH3	3-CH3	4-1	5-S02CH2CH2C(CH3)CF2
IX.64	1-013	3-CH3	4-C00C2115	5-SCI12CI12C(CI13)CF2
IX.65	1 (313)	3 CH3	4-COOC2115	5-SOC112CH2C(C113)CH2

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5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOC112CH2C(CH3)CH2	5-SO2CI12CI12C(CI13)CF2	5-SC112C112C(CH3)CF2	5-SOCH2CH2C(CH3)C1:2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCI12CH2C(CH3)CH2	5-SO2CH2CH2C(CH3)CH2	5-SCI12CI12C(CI13)CI <sup>-</sup> 2	5-SOCH2CH2C(CII3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CII2C(CII3)CF2	5-SOCI12CH2C(CH3)CF2	5-SO2C112C112C(C113)CF2	5-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2	5-S02CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	5-SOCI12CH2C(CH3)CF2
S-SC	5-SC	5-S	2-80	<b>S-S</b> (	\$-S(	5-S(	5-S(	S-S	5-S	S-S	S-S	5-S	<b>S-S</b>	S-S	5-S	S-S	S-S	5-8	2-8	5-6
4-C00C2115	4-COOH	4-COOII	4-C00II	4-CONII2	4-CONII2	4-CONII2	4-CN	4-CN	4-CN	4-SO2F	4-SO2F	4-SO2F	4-SO2N112	4-SO2NH2	4-SO2NI12	4-NO2	4-NO2	4-NO2	4-H	4-H
3-CH3	3-CH3	3-CII3	3-C113	3-CH3	3-CH3	3-CH3	3-CH3	3-CH3	3-CH3	3-CH3	3-C113	3-CH3	3-CH3	3-CH3	3-CH3	3-CII3	3-CH3	3-CH3	3-CF3	3-CF3
1.013	I-CH3	1-CH3	I-CII3	1-C113	1-CH3	1-CH3	1-(113	I-CH3	I-CII3	1-C113	1-CII3	1-CH3	1-CH3	1-CH3	1-CH3	1-C113	I-CH3	1-0113	1-CH3	1-CH3
1X.66	1X.67	1X.68	1X.69	1X.70	1X.71	1X.72	1X.73	1X.74	1X.75	1X.76	1X.77	1X.78	1X.79	08 XI	18.XI	1X.82	1X.83	1X X	1X.85	1X.86

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	5-Cl <sup>-3</sup>	5-CH3	5-CH3	5-C113	5-C6115	5-C6115	5-C6H5	5-(2-Thienyl)	5-(2-Thienyl)	5-(2-Thienyl)	5-SCH2CH2C(CH3)CF2	5-SOCII2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CH2	5-SCH2CH2C(CH3)CH2	5-SOCH2CH2C(CH3)CF2	5-SO2C112C112C(C113)CF2	5-8CH2CICH3)CH2		5-SOCH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CT2	5-80CH5CH5CH5CC
	4-11	4-11	11-7	4-11	4-11	4-11	4-11	4-11	4-11	4-1:1	4-H	1-7	4-11	4-CN	4-CN	NO.	VIII (10)	4-COOC2115	4-COOC2115	4-C00C2H5	4-C00II	4-C00II
- 35 -	3-SO2CH2CH2C(CH3)CF2	3-SCI12CI12C(CH3)CF2	3-SOC112C112C(C113)CF2	3-SO2CH2CH2C(CH3)CF2	3-SCH2CH2C(CH3)CF2	3-SOCH2CH2C(CH3)CF2	3-S02C112C112C(C113)CF2	3-SC112CH2C(CH3)CF2	3-SOC112C112C(C113)CF2	3-SO2C112C112C=CF2	3-11		7	11.0		3-11	3-11	3-11	3-11	3-11	3-11	3.11
	F.C.113	I-C112C0OH	1-CH2COOH	I CH2COOH	I C 112COOC'2115	1 (112000(2115	1-(1120:000:2115	I-CII2CN	1-C112CN	LCHCK	1.0%115	51100-1			1-C6H5	I-Coll5	1-C6115	1-0.0115	5119.)-1	1-0.0115	1-C6115	1 (30115
	XII											6 3	N. 115	1X.120	IX.121	IX.122	IX.123	1X.124	1X.125	IX.126	1X.127	1X.128

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IX.129	1-('6115	3-11	4-C00II	5-SO2CH2CH2C(CH3)CF2
IX.130	1-C6H5	3-11	4-CI	5-SCH2CI12C(C113)CF2
IX.131	I-C6H5	3-11	4-CI	5-SOC112C112C(C113)CF2
IX.132	1-C6H5	3-11	4-CI	5-SO2CH2CI12C(CI13)CF2
IX.133	1-C6H5	3-II	4-SO2F	5-SCII2CII2C(CII3)CF2
IX.134	1.0'6115	3-11	4-SO2F	5-SOC112C112C(C113)C122
IX.135	I-C'6H5	3-11	4-S02F	5-SO2CI12C112C(C113)CF2
IX.136	1-C6H5	3-CH3	4-H	5-SCI12CI12C(CI13)CI <sup>2</sup> 2
IX.137	I-C:6115	3-CH3	4-H	5-SOCII2CH2C(CII3)CF2
IX.138	1-C6115	3-CH3	4-H	5-SO2CH2CH2C(CH3)CF2
IX.130	1-C6H5	3-CH3	4-CN	5-SCH2CI12C(CI13)CF2
IX.140	1-C6115	3-CH3	4-CN	5-SOCH2CH2C(CH3)CF2
1X.141	1.C'6115	3-(113	4-CN	5-SO2CH2CH2C(CH3)('1:2
IX.142	I-C6H5	3-CH3	4-C00C2II5	5-SCI12C112C(C113)CF2
IX.143		3-CH3	4-C00C2II5	5-SOCI12CI12C(CI13)CF2
IX.144		3-CH3	4-C00C2II5	5-SO2CH2CH2C(CH3)CF2
1X.145	1-C6H5	3-CH3	4-C00II	5-SCI12C112C(C113)CF2
1X.146	1-Cell5	3-CH3	4-C001I	5-SOCH2CH2C(CH3)CF2
1X.147	1-C6115	3-CII3	4-COOH	5-S02CH2CH2C(CH3)CF2
1X.148	1-('6115	3-CH3	4-Cl	5-SCH2CH2C(CH3)CF2
IX.149	5119.5-1	3-C113	4-CI	5-SOCH2CH2C(CH3)CF2

1X.150	5119.3-1	3-CH3	4-CI	5-SO2CH2CH2C(CH3)CF2	
IX.151	1-C6115	3-CH3	4-SO2F	5-SCH2CH2C(CH3)CF2	
1X.152	1-C6H5	3-CH3	4-S02F	5-SOCH2CH2C(CH3)CH2	•
1X.153	1-C0115	3-C113	4-SO2F	5-SO2CH2CH2C(CH3)CF2	
1X.154	1-(6115	3-CI	4-11	5-SC112CH2C(CH3)CF2	
IX.155	1 (6115	3-C'I	4-11	5-SOC112C112C(C113)CF2	
1X.156	1-C6115	3-CI	4-11	5-SO2CH2CH2C(CH3)CF2	
1X.157	1-C6115	3-C00C2H5	4-11	5-SCH2CH2C(CH3)CF2	
1X.158	1-('6115	3-COOC2115	4-H	5-SOC112C112C(C113)CF2	
1X.159	5119.)-1	3-C00C2H5	4-11	5-SO2CH2CH2C(CH3)CF2	
1X.160	1-C6H5	3-COOH	4-H	5-SCI12C112C(CH3)CF2	
IX.161	1-C6115	3-C0011	4-11	5-SOC112C112C(C113)CF2	
1X.162	1-C0115	3-C00II	4-11	5-SO2CH2CH2C(CH3)CF2	
1X.163		3-CONII2	4-11	5-SCH2CH2C(CH3)CF2	
1X.164		3-CON112	4-11	5-SOCH2CH2C(CH3)CF2	
1X.165		3-CONH2	4-H	5-SO2CH2CH2C(CH3)CF2	
1X.166		3-CN	4-H	5-SCH2CH2C(CH3)CF2	
1X.167		3-CN	4-11	5-SOCI12CI12C(CI13)CF2	
1X.168		3-CN	4-11	5-S02CH2CH2C(CH3)CF2	
(9) XI	1-0.0115	3-S02F	4-11	5-SCI12CH2C(CH3)CF2	
1X.170		3-SO2F	4-11	5-SOC112C112C(C113)C12	

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	5-SO2CH2CH2C(CH3)CF2	5-SC112C112C(C113)C1·2	5-SOCI12CI12C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2	5-CN	S-CN	S-CN	5-C00C2115	5-C00C2II5	5-C00C2H5	5-CF3	5-CF3	5-Cl:3	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11
	4-11	4-11	4-11	4·II	4-SCH2CH2C(CH3)CF2	4-SOC112C112C(C113)CF2	4-S02C112C112C=CF2	4-SCH2CH2C(CH3)CF2	4-SOC112C112C(C113)CF2	4-S02CI12CI12C=CI·2	4-SCI12CI12C(CI13)CI <sup>2</sup>	4-SOC112CH2C(CH3)CF2	4-SO2CH2CH2C(CH3)CF2	4-SCH2CH2C(CH3)CF2	4-SOCH2CH2C(CH3)CF2	4-SO2CH2CH2C(CH3)CF2	4-SC112C112C(C113)CF2	4-SOC112C112C(CH3)CF2	4-S02CH2CH2C(CH3)CF2	4-SCH2CH2C(CH3)CF2	4-SOCII2CII2C(C113)CF2
- 38 -	3-SO2F	3-SO2NI12	3-SO2NII2	3-SO2NI12	3-11	3.11	3-11	3-11	3-11	3-11	3-11	3-11	3-11	3-CN	3-CN	3-CN	3-C00C2115	3-C00C2115	3-C00C2H5	3-CF3	3-CF3
	1-C6H5	1-C6H5	1-09115	1-C6115	ECHB	1-CH3	1-CH3	I-CH3	LCH3	I-CH3	1-C113	I-CH3	I-CH3	I-CH3	I CH3	LCH3	1-CH3	1.CH3	1-CH3	1.013	F.CH3
	17.171	IX.172	1X.17.3	IX.174	IX.175	1X.176	1X.177	1X.178	071.XI	IX.180	1X.181	IX.182	IX.183	IX.184	IX.185	1X.186	1X.187	1X.188	1X.189	1X.190	1X.191

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1X.192 1.CH3

Examples of compounds of Formula (X) according to the invention are set out in Table X.

### TABLE X

No.	R3	R5
X.1	3-c-C3H5	5-SCH2CH2C(CH3)CF2
X.2	3-C°CH	5-SCH2CH2C(CH3)CF2
X.3	3-C6H5	5-SCH2CH2C(CH3)CF2
X.4	3-C6H5	5-SOCH2CH2C(CH3)CF2
X.5	3-C6H5	5-SO2CH2CH2C(CH3)CF2
X.6	3-CF2H	5-SCH2CH2C(CH3)CF2
X.7	3-CF3	5-SCH2CH2C(CH3)CF2
X.8	3-CH(CH3)2	5-SCH2CH2C(CH3)CF2
X.9	3-CH=CH2	5-SCH2CH2C(CH3)CF2
X.10	3-CH2Br	5-SCH2CH2C(CH3)CF2
X.11	3-CH2C6H5	5-SCH2CH2C(CH3)CF2
X.12	3-CH2C6H5	5-SOCH2CH2C(CH3)CF2
X.13	3-CH2CF3	5-SCH2CH2C(CH3)CF2
X.14	3-CH2CF3	5-SOCH2CH2C(CH3)CF2
X.15	3-CH2CF3	5-SO2CH2CH2C(CH3)CF2
X.16	3-CH2CH=CH2	5-SCH2CH2C(CH3)CF2
X.17	3-CH2CH2F	5-SCH2CH2C(CH3)CF2
X.18	3-CH2CH3	5-SCH2CH2C(CH3)CF2
X.19	3-CH2CN	5-SCH2CH2C(CH3)CF2
X.20	3-CH2CN	5-SOCH2CH2C(CH3)CF2
X.21	3-CH2CONH2	5-SCH2CH2C(CH3)CF2
X.22	3-CH2COOCH2CH3	5-SCH2CH2C(CH3)CF2
X.23	3-CH2N(CH3)2	5-SCH2CH2C(CH3)CF2
X.24	3-CH2NHCOCH3	5-SCH2CH2C(CH3)CF2
X.25	3-CH2NHCOOCH3	5-SCH2CH2C(CH3)CF2
X.26	3-CH2OCH3	5-SCH2CH2C(CH3)CF2

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X.27	3-CH2OCH3	5-SO2CH2CH2C(CH3)CF2
X.28	3-CH2OH	5-SCH2CH2C(CH3)CF2
X.29	3-CH2OH	5-SOCH2CH2C(CH3)CF2
•	3-CH2SO2C6H5	5-SCH2CH2C(CH3)CF2
X.30	3-CH2SO2C6H5	5-SO2CH2CH2C(CH3)CF2
X.31	3-CH3	5-SCH2CH2C(CH3)CF2
X.32	3-CH3	5-SOCH2CH2C(CH3)CF2
X.33	3-CH3	5-SO2CH2CH2C(CH3)CF2
X.34	3-COC6H5	5-SCH2CH2C(CH3)CF2
X.35	3-COCH3	5-SCH2CH2C(CH3)CF2
X.36	3-CON(CH3)2	5-SCH2CH2C(CH3)CF2
X.37	3-CON(CH3)2	5-SCH2CH2C(CH3)CF2
X.38	3-CONHCH2C6H5	5-SCH2CH2C(CH3)CF2
X.39	3-CONHCH2C6H5	5-SOCH2CH2C(CH3)CF2
X.40	3-CONHCH2CH2CHCF2	5-SCH2CH2C(CH3)CF2
X.41	3-CONHCH2	5-SCH2CH2C(CH3)CF2
X.42	3-CONHCH3	5-SCH2CH2C(CH3)CF2
X.43		5-SCH2CH2C(CH3)CF2
X.44	3-COOC6H5	5-SOCH2CH2C(CH3)CF2
X.45	3-COOC6H5	5-SO2CH2CH2C(CH3)CF2
X.46	3-COOC6H5	5-SCH2CH2C(CH3)CF2
X.47	3-COOCH2CH2CHCF2	5-SOCH2CH2C(CH3)CF2
X.48	3-COOCH2CH2CHCF2	5-SO2CH2CH2C(CH3)CF2
X.49	3-COOCH2CH2CHCF2	5-SCH2CH2C(CH3)CF2
X.50	3-COOCH2CH2F	5-SCH2CH2C(CH3)CF2
X.51	3-COOCH3	5-SCH2CH2C(CH3)CF2
X.52	3-COOH	5-SCH2CH2C(CH3)CF2
X.53	3-COSCH2CH2CHCF2	5-SCH2CH2C(CH3)CF2
X.54	3-CSNH2	5-SCH2CH2C(CH3)CF2
X.55	3-Н	5-SOCH2CH2C(CH3)CF2
X.56	3-Н	5-SO2CH2CH2C(CH3)CF2
X.57	3-H	5-SCH2CH2C(CH3)CF2
X.58	3-N(SO2CH3)2	2-20U20U20U20U2

	X.59	3-NHCH2CH3	5-SCH2CH2C(CH3)CF2
	X.60	3-NHCHO	5-SCH2CH2C(CH3)CF2
	X.61	3-NHCOOCH3	5-SCH2CH2C(CH3)CF2
	X.62	3-NHCOCF3	5-SCH2CH2C(CH3)CF2
	X.63	3-NHCOCF3	5-SOCH2CH2C(CH3)CF2
	X.64	3-NHCOCH3	5-SCH2CH2C(CH3)CF2
	X.65	3-NHCOCH3	5-SO2CH2CH2C(CH3)CF2
	X.66	3-NHCSCH2CH3	5-SCH2CH2C(CH3)CF2
	X.67	3-NHCSNHCH2CH3	5-SCH2CH2C(CH3)CF2
	X.68	3-NHSO2CH3	5-SCH2CH2C(CH3)CF2
	X.69	3-OCF2CF2H	5-SCH2CH2C(CH3)CF2
	X.70	3-OCF3	5-SCH2CH2C(CH3)CF2
	X.71	3-OCF3	5-SOCH2CH2C(CH3)CF2
	X.72	3-OCH2C6H5	5-SCH2CH2C(CH3)CF2
	X.73	3-OCH2C6H5	5-SO2CH2CH2C(CH3)CF2
	X.74	3-OCH2CF3	5-SCH2CH2C(CH3)CF2
•	X.75	3-OCH2CF3	5-SOCH2CH2C(CH3)CF2
	X.76	3-OCH2CF3	5-SO2CH2CH2C(CH3)CF2
	X.77	3-OCH2CH=CCl2	5-SCH2CH2C(CH3)CF2
	X.78	3-OCH2CH2CHCF2	5-SCH2CH2C(CH3)CF2
	X.79	3-OCH2CH2CHCF2	5-SOCH2CH2C(CH3)CF2
	X.80	3-OCH2CH2CHCF2	5-SO2CH2CH2C(CH3)CF2
	X.81	3-OCH2CH2F	5-SCH2CH2CHCF2
	-X.82	3-OCH2COOH	5-SCH2CH2C(CH3)CF2
	X.83	3-OCH3	5-SCH2CH2C(CH3)CF2
	X.84	3-OCOC6H5	5-SCH2CH2C(CH3)CF2
	X.85	3-OCOCH3	5-SCH2CH2C(CH3)CF2
	X.86	3-OC6H5	5-SCH2CH2C(CH3)CF2
	X.87	3-OC6H5	5-SOCH2CH2C(CH3)CF2
	X.88	3-OC6H5	5-SO2CH2CH2C(CH3)CF2
	X.89	3-OSO2CH3	5-SCH2CH2C(CH3)CF2
	X.90	3-OSO2CH3	5-SOCH2CH2C(CH3)CF2
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X.91	3-SCF3	5-SCH2CH2C(CH3)CF2
X.92	3-SCH2CH2C(CH3)CF2	5-C6H5
X.93	3-SOCH2CH2C(CH3)CF2	5-C6H5
X.94	3-SO2CH2CH2C(CH3)CF2	5-C6H5
X.95	3-SCH2CH2C(CH3)CF2	5-CF2H
X.96	3-SCH2CH2C(CH3)CF2	5-CF3
X.97	3-SCH2CH2C(CH3)CF2	5-CH2C6H5
X.98	3-SOCH2CH2C(CH3)CF2	5-CH2C6H5
X.99	3-SCH2CH2C(CH3)CF2	5-CH2CF3
X.100	3-SCH2CH2C(CH3)CF2	5-CH2CH2F
X.101	3-SCH2CH2C(CH3)CF2	5-CH2Cl
X.102	3-SCH2CH2C(CH3)CF2	5-CH2CN
X.103	3-SCH2CH2C(CH3)CF2	5-CH2OCH3
X.104	3-SCH2CH2C(CH3)CF2	5-CH2OH
X.105	3-SCH2CH2C(CH3)CF2	5-CH3
X.106	3-SO2CH2CH2C(CH3)CF2	5-CH3
X.107	3-SCH2CH2C(CH3)CF2	5-Cl
X.108	3-SCH2CH2C(CH3)CF2	5-CN
X.109	3-SCH2CH2C(CH3)CF2	5-CON(CH3)2
X.110	3-SCH2CH2C(CH3)CF2	5-COOCH2CH2CHCF2
X.111	3-SCH2CH2C(CH3)CF2	5-COOCH2CH3C2F
X.112	3-SCH2CH2C(CH3)CF2	5-COOCH3
X.113	3-SCH2CH2C(CH3)CF2	5-F
X.114	3-SCH2CH2C(CH3)CF2	5-H
X.115	3-SCH2CH2C(CH3)CF2	5-N(SO2CH3)2
X.116	3-SCH2CH2C(CH3)CF2	5-NHCHO
X.117	3-SCH2CH2C(CH3)CF2	5-NHCOCF3
X.118	3-SCH2CH2C(CH3)CF2	5-NHCOOCH3
X.119	3-SCH2CH2C(CH3)CF2	5-NHSO2CH3
X.120	3-SCH2CH2C(CH3)CF2	5-NO2
X.121	3-SCH2CH2C(CH3)CF2	5-OC6H5
X.122	3-SCH2CH2C(CH3)CF2	5-OCF2H

•	X.123	3-SCH2CH2C(CH3)CF2	5-OCF3
	X.124	3-SCH2CH2C(CH3)CF2	5-OCH2CF3
	X.125	3-SOCH2CH2C(CH3)CF2	5-OCH2CF3
	X.126	3-SO2CH2CH2C(CH3)CF2	5-OCH2CF3
	X.127	3-SCH2CH2C(CH3)CF2	5-OCOCH3
	X.128	3-SCH2CH2C(CH3)CF2	5-OSO2CH3
	X.129	3-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
	X.130	3-SOCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
	X.131	3-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
	X.132	3-SCH2CH2C(CH3)CF2	5-SCH3 •
	X.133	3-SCH2CH2C(CH3)CF2	5-SO2CF3
	X.134	3-SOCH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
	X.135	3-SO2CH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
	X.136	3-SCH2CH2C(CH3)CF2	5-SO2CH3
	X.137	3-SO2CH2CH2C(CH3)CF2	5-SO2CH3
	X.138	3-SCH2CH2C(CH3)CF2	5-SO2N(CH3)2
	X.139	3-SCH2CH2C(CH3)CF2	5-SOCF3
	X.140	3-SOCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
	X.141	3-SCH3	5-SCH2CH2C(CH3)CF2
	X.142	3-SO2CF3	5-SCH2CH2C(CH3)CF2
	X.143	3-SO2CF3	5-SO2CH2CH2C(CH3)CF2
	X.144	3-SO2CH3	5-SCH2CH2C(CH3)CF2
	X.145	3-SO2N(CH3)2	5-SCH2CH2C(CH3)CF2
•	X.146	3-SO2NH2	5-SCH2CH2C(CH3)CF2
	X.147	3-SO2NHCH3	5-SCH2CH2C(CH3)CF2
	X.148	3-SO2NHCH3	5-SO2CH2CH2C(CH3)CF2
	X.149	3-SOCF3	5-SCH2CH2C(CH3)CF2
	X.150	3-SOCF3	5-SOCH2CH2C(CH3)CF2
	X.151	. 3-SOCH3	5-SCH2CH2C(CH3)CF2
	X.152	3-SOCH3	5-SO2CH2CH2C(CH3)CF2
	X.153	3-(4-CF3-C6H4)	5-SCH2CH2C(CH3)CF2
	X.154	3-(4-CF3-C6H4)	5-SO2CH2CH2C(CH3)CF2

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X.155	3-(4-CH3-C6H4)	5-SCH2CH2C(CH3)CF2
X.156	3-(4-CN-C6H4)	5-SCH2CH2C(CH3)CF2
X.157	3-(4-CONH2-C6H4)	5-SCH2CH2C(CH3)CF2
	3-(4-CONH2-C6H4)	5-SO2CH2CH2C(CH3)CF2
X.158	3-(4-NO2-C6H4)	5-SCH2CH2C(CH3)CF2
X.159		5-SCH2CH2C(CH3)CF2
X.160	3-(4-OCH3-C6H4)	3 33223234 7

Examples of compounds of Formula (XI) according to the invention are set out in Table XI.

# TABLE XI

No.	R3	R5
XI.1	3-Br	5-SCH2CH2C(CH3)CF2
XI.2	3-c-C5H9	5-SCH2CH2C(CH3)CF2
X1.3	3-c-C5H9	5-SOCH2CH2C(CH3)CF2
XI.4	3-C°CH	5-SCH2CH2C(CH3)CF2
XI.5	3-C6H5	5-SCH2CH2C(CH3)CF2
XI.6	3-C6H5	5-SOCH2CH2C(CH3)CF2
XI.7	3-C6H5	5-SO2CH2CH2C(CH3)CF2
XI.8	3-CF2H	5-SCH2CH2C(CH3)CF2
XI.9	3-CF3	5-SCH2CH2C(CH3)CF2
XI.10	3-CH=CH2	5-SCH2CH2C(CH3)CF2
XI.10	3-CH=CHCH3	5-SCH2CH2C(CH3)CF2
XI.11	3-CH=CHCN	5-SCH2CH2C(CH3)CF2
XI.12 XI.13	3-CH=CHNO2	5-SCH2CH2C(CH3)CF2
XI.13	3-CH=NOCH3	5-SCH2CH2C(CH3)CF2
•	3-CH2(3-CF3-C6H4)	5-SCH2CH2C(CH3)CF2
XI.15	3-CH2(3-CF3-C6H4)	5-SCH2CH2C(CH3)CF2
XI.16	3-CH2C6H5	5-SCH2CH2C(CH3)CF2
XI.17	-	5-SOCH2CH2C(CH3)CF2
XI.18	3-CH2C6H5	5-SO2CH2CH2C(CH3)CF2
XI.19	3-CH2C6H5	J-302CI12CI12CI

XI.20	3-CH2CF3	5-SCH2CH2C(CH3)CF2
XI.21	3-CH2CF3	5-SOCH2CH2C(CH3)CF2
XI.22	3-CH2CH=CH2	5-SCH2CH2C(CH3)CF2
XI.23	3-CH2CH3	5-SCH2CH2C(CH3)CF2
XI.24	3-CH2CH3	5-SO2CH2CH2C(CH3)CF2
XI.25	3-CH2Cl	5-SCH2CH2C(CH3)CF2
XI.26	3-CH2CN	5-SCH2CH2C(CH3)CF2
XI.27	3-CH2CONH2	5-SCH2CH2C(CH3)CF2
XI.28	3-CH2N(CH3)2	5-SCH2CH2C(CH3)CF2
XI.29	3-CH2NHCOCH3	5-SCH2CH2C(CH3)CF2
XI.30	3-CH2OCH2CH2CH2CH3	5-SCH2CH2C(CH3)CF2
XI.31	3-CH2OCH2CH2CH3	5-SCH2CH2C(CH3)CF2
XI.32	3-CH2OCH2CH3	5-SCH2CH2C(CH3)CF2
XI.33	3-CH2OCH2CH3	5-SOCH2CH2C(CH3)CF2
XI.34	3-CH2OCH3	5-SCH2CH2C(CH3)CF2
XI.35	3-CH2OCH3	5-SOCH2CH2C(CH3)CF2
XI.36	3-CH2OCH3	5-SO2CH2CH2C(CH3)CF2
XI.37	3-CH2OH	5-SCH2CH2C(CH3)CF2
XI.38	3-CH2SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.39	3-CH2SO2C6H5	5-SCH2CH2C(CH3)CF2
XI.40	3-CH3	5-SCH2CH2C(CH3)CF2
XI.41	3-CH3	5-SOCH2CH2C(CH3)CF2
XI.42	3-CH3	5-SO2CH2CH2C(CH3)CF2
XI.43	3-Cl	5-SCH2CH2C(CH3)CF2
XI.44	3-Cl	5-SO2CH2CH2C(CH3)CF2
XI.45	3-CN	5-SCH2CH2C(CH3)CF2
XI.46	3-COC6H5	5-SCH2CH2C(CH3)CF2
XI.47	3-COCH3	5-SCH2CH2C(CH3)CF2
XI.48	3-CON(CH3)2	5-SCH2CH2C(CH3)CF2
XI.49	3-CON(CH3)C2H5	5-SCH2CH2C(CH3)CF2
XI.50	3-CONH2	5-SCH2CH2C(CH3)CF2
XI.51	3-CONHCH2C6H5	5-SCH2CH2C(CH3)CF2

XI.52	3-CONHCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.53	3-CONHCH2CH2CH3	5-SCH2CH2C(CH3)CF2
XI.54	3-CONHCH3	5-SCH2CH2C(CH3)CF2
XI.55	3-CONHCH3	5-SOCH2CH2C(CH3)CF2
XI.56	3-CONHCH3	5-SO2CH2CH2C(CH3)CF2
XI.57	3-CONHSO2CH3	5-SCH2CH2C(CH3)CF2
XI.58	3-COOC6H5	5-SCH2CH2C(CH3)CF2
XI.59	3-COOCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.60	3-COOCH2CH2F	5-SCH2CH2C(CH3)CF2
XI.61	3-COOCH2CH3	5-SCH2CH2C(CH3)CF2
XI.62	3-COOCH3	5-SCH2CH2C(CH3)CF2
XI.63	3-COOH	5-SCH2CH2C(CH3)CF2
XI.64	3-COSCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.65	3-CSNH2	5-SCH2CH2C(CH3)CF2
XI.66	3-F	5-SCH2CH2C(CH3)CF2
XI.67	3-H	5-SCH2CH2C(CH3)CF2
XI.68	3-H	5-SOCH2CH2C(CH3)CF2
XI.69	3-H	5-SO2CH2CH2C(CH3)CF2
XI.70	3-N(SO2CH3)2	5-SCH2CH2C(CH3)CF2
XI.71	3-NHCHO	5-SCH2CH2C(CH3)CF2
XI.72	3-NHCOC2H5	5-SCH2CH2C(CH3)CF2
XI.73	3-NHCOCF3	5-SCH2CH2C(CH3)CF2
<b>X</b> I.74	3-NHCOCH3	5-SCH2CH2C(CH3)CF2
XI.75	3-NHCSCH2CH3	5-SCH2CH2C(CH3)CF2
XI.76	3-NHCSNHCH2CH3	5-SCH2CH2C(CH3)CF2
XI.77	3-NHSO2CH3	5-SCH2CH2C(CH3)CF2
XI.78	3-NO2	5-SCH2CH2C(CH3)CF2
XI.79	3-OC6H5	5-SCH2CH2C(CH3)CF2
X1.80	3-OCF2CF2H	5-SCH2CH2C(CH3)CF2
XI.81	3-OCF2H	5-SCH2CH2C(CH3)CF2
XI.82	3-OCF3	5-SCH2CH2C(CH3)CF2
X1.83	3-OCH2CF3	5-SCH2CH2C(CH3)CF2

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XI.84	3-OCH2CF3	5-SOCH2CH2C(CH3)CF2
XI.85	3-OCH2CF3	5-SO2CH2CH2C(CH3)CF2
XI.86	3-OCH2CH=CCl2	5-SCH2CH2C(CH3)CF2
XI.87	3-OCH3	5-SCH2CH2C(CH3)CF2
XI.88	3-OCOC2H5	5-SCH2CH2C(CH3)CF2
XI.89	3-OCOC6H5	5-SCH2CH2C(CH3)CF2
XI.90	3-OCOCH3	5-SCH2CH2C(CH3)CF2
XI.91	3-OSO2CH3	5-SCH2CH2C(CH3)CF2
XI.92	3-SCF3	5-SCH2CH2C(CH3)CF2
XI.93	3-SCH2CH2C(CH3)CF2	5-CF3
XI.94	3-SCH2CH2C(CH3)CF2	5-CH2C6H5
XI.95	3-SCH2CH2C(CH3)CF2	5-CH2CF3
XI.96	3-SCH2CH2C(CH3)CF2	5-CH2CH=CH2
XI.97	3-SCH2CH2C(CH3)CF2	5-CH2CN
XI.98	3-SCH2CH2C(CH3)CF2	5-CH2CONH2
XI.99	3-SCH2CH2C(CH3)CF2	5-CH2NHCOCH3
XI.100	3-SCH2CH2C(CH3)CF2	5-CH2OCH3
XI.101	3-SCH2CH2C(CH3)CF2	5-CH3
XI.102	3-SCH2CH2C(CH3)CF2	5-Cl
XI.103	3-SCH2CH2C(CH3)CF2	5-CN
XI.104	3-SCH2CH2C(CH3)CF2	5-COOCH3
XI.105	3-SCH2CH2C(CH3)CF2	5-NHCHO
XI.106	3-SCH2CH2C(CH3)CF2	5-OC6H5
XI.107	3-SCH2CH2C(CH3)CF2	5-OCH2CF3
XI.108	3-SCH2CH2C(CH3)CF2	5-OCH3
XI.109	3-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.110	3-SCH3	5-SCH2CH2C(CH3)CF2
XI.111	3-SO2C2H5	5-SCH2CH2C(CH3)CF2
XI.112	3-SO2CF3	5-SCH2CH2C(CH3)CF2
XI.113	3-SO2CH2CH2C(CH3)CF2	5-OCH2CF3
XI.114	3-SO2CH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.115	3-SO2CH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2

XI.116	3-SO2F	5-SCH2CH2C(CH3)CF2
XI.117	3-SO2N(CH3)2	5-SCH2CH2C(CH3)CF2
XI.118	3-SO2NH2	5-SCH2CH2C(CH3)CF2
XI.119	3-SO2NHCH3	5-SCH2CH2C(CH3)CF2
XI.120	3-SOCF3	5-SCH2CH2C(CH3)CF2
XI.121	3-SOCH2CH2C(CH3)CF2	5-CH2CN
XI.122	3-SOCH2CH2C(CH3)CF2	5-OCH2CF3
XI.123	3-SOCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XI.124	3-SOCH3	5-SCH2CH2C(CH3)CF2
XI.125	3-(2-Pyrazinyl)	5-SCH2CH2C(CH3)CF2
XI.126	3-(3-F-C6H4)	5-SCH2CH2C(CH3)CF2
XI.127	3-(3-NO2-C6H4)	5-SCH2CH2C(CH3)CF2
XI.128	3-(3-NO2-C6H4)	5-SOCH2CH2C(CH3)CF2
XI.129	3-(3-NO2-C6H4)	5-SO2CH2CH2C(CH3)CF2
XI.130	3-(4-F-C6H4)	5-SCH2CH2C(CH3)CF2
XI.131	3-(4-F-C6H4)	5-SOCH2CH2C(CH3)CF2
XI.132	3-(4-F-C6H4)	5-SO2CH2CH2C(CH3)CF2

Examples of compounds of Formula (XII) according to the invention are set out in Table XII.

## TABLE XII

No.	R2	R5
XII.1	2-SCH2CH2C(CH3)CF2	5-c-C3H5
XII.2	2-SCH2CH2C(CH3)CF2	5-C°CH
XII.3	2-SCH2CH2C(CH3)CF2	5-C6H5
XII.4	2-SOCH2CH2C(CH3)CF2	5-C6H5
XII.5	2-SO2CH2CH2C(CH3)CF2	5-C6H5
XII.6	2-SCH2CH2C(CH3)CF2	5-CF2H
XIL7	2-SCH2CH2C(CH3)CF2	5-CF3
XII.8	2-SCH2CH2C(CH3)CF2	5-CH(CH3)2

XII.9	2-SO2CH2CH2C(CH3)CF2	5-CH(CH3)2
XII.10	2-SCH2CH2C(CH3)CF2	5-CH=CH2
XII.11	2-SCH2CH2C(CH3)CF2	5-CH2(2,6-di F -C6H3)
XII.12	2-SCH2CH2C(CH3)CF2	5-CH2(4-NO2-C6H4)
XII.13	2-SO2CH2CH2C(CH3)CF2	5-CH2(4-NO2-C6H4)
XII.14	2-SOCH2CH2C(CH3)CF2	5-CH2(4-OCH3-C6H4)
XII.15	2-SO2CH2CH2C(CH3)CF2	5-CH2(4-OCH3-C6H4)
XII.16	2-SCH2CH2C(CH3)CF2	5-CH2Br
XII.17	2-SCH2CH2C(CH3)CF2	5-CH2C6H5
XII.18	2-SOCH2CH2C(CH3)CF2	5-CH2C6H5
XII.19	2-SO2CH2CH2C(CH3)CF2	5-CH2C6H5
XII.20	2-SCH2CH2C(CH3)CF2	5-CH2CF3
XII.21	2-SOCH2CH2C(CH3)CF2	5-CH2CF3
XII.22	2-SO2CH2CH2C(CH3)CF2	5-CH2CF3
XII.23	2-SCH2CH2C(CH3)CF2	5-CH2CH(CH3)2
XII.24	2-SCH2CH2C(CH3)CF2	5-CH2CH=CH2
XII.25	2-SCH2CH2C(CH3)CF2	5-CH2CH2CH2CH2CH3
XII.26	2-SOCH2CH2C(CH3)CF2	5-CH2CH2CH2CH2CH3
XII.27	2-SO2CH2CH2C(CH3)CF2	5-CH2CH2CH2CH2CH3
XII.28	2-SCH2CH2C(CH3)CF2	5-CH2CH2CH2CH3
XII.29	2-SOCH2CH2C(CH3)CF2	5-CH2CH2CH2CH3
XII.30	2-SO2CH2CH2C(CH3)CF2	5-CH2CH2CH2CH3
XII.31	2-SCH2CH2C(CH3)CF2	5-CH2CH2CH3
XII.32	2-SOCH2CH2C(CH3)CF2	5-CH2CH2CH3
XII.33	2-SO2CH2CH2C(CH3)CF2	5-CH2CH2CH3
XII.34	2-SCH2CH2C(CH3)CF2	5-CH2CH2F
XII.35	2-SCH2CH2C(CH3)CF2	5-CH2CH3
XII.36	2-SCH2CH2C(CH3)CF2	5-CH2CN
XII.37	2-SOCH2CH2C(CH3)CF2	5-CH2CN
XII.38	2-SCH2CH2C(CH3)CF2	5-CH2CONH2
XII.39	2-SCH2CH2C(CH3)CF2	5-CH2COOCH2CH3
XII.40	2-SCH2CH2C(CH3)CF2	5-CH2N(CH3)2

XII.41	2-SCH2CH2C(CH3)CF2	5-CH2NHCOCH3
XII.42	2-SCH2CH2C(CH3)CF2	5-CH2NHCOOCH3
XII.43	2-SCH2CH2C(CH3)CF2	5-CH2OCH3
XII.44	2-SO2CH2CH2C(CH3)CF2	5-CH2OCH3
XII.45	2-SCH2CH2C(CH3)CF2	5-CH2OH
XII.46	2-SOCH2CH2C(CH3)CF2	5-CH2OH
XII.47	2-SCH2CH2C(CH3)CF2	5-CH2SO2C6H5
XII.48	2-SO2CH2CH2C(CH3)CF2	5-CH2SO2C6H5
XII.49	2-SCH2CH2C(CH3)CF2	5-CH3
XII.50	2-SOCH2CH2C(CH3)CF2	5-CH3
XII.51	2-SO2CH2CH2C(CH3)CF2	5-CH3
XII.52	2-SCH2CH2C(CH3)CF2	5-COC6H5
XII.53	2-SCH2CH2C(CH3)CF2	5-COCH3
XII.54	2-SCH2CH2C(CH3)CF2	5-CON(CH3)2
XII.55	2-SCH2CH2C(CH3)CF2	5-CONH2
XII.56	2-SCH2CH2C(CH3)CF2	5-CONHCH2C6H5
XII.57	2-SOCH2CH2C(CH3)CF2	5-CONHCH2C6H5
XII.58	2-SCH2CH2C(CH3)CF2	5-CONHCH2CH2C(CH3)CF2
XII.59	2-SCH2CH2C(CH3)CF2	5-CONHCH3
XII.60	2-SCH2CH2C(CH3)CF2	5-CONHSO2CH3
XII.61	2-SCH2CH2C(CH3)CF2	5-COOC6H5
XII.62	2-SOCH2CH2C(CH3)CF2	5-COOC6H5
XII.63	2-SO2CH2CH2C(CH3)CF2	5-COOC6H5
XII.64	2-SCH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XII.65	2-SOCH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XII.66	2-SO2CH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XII.67	2-SCH2CH2C(CH3)CF2	5-COOCH2CH2F
XII.68	2-SCH2CH2C(CH3)CF2	5-COOCH2CH3
XII.69	2-SCH2CH2C(CH3)CF2	5-COOCH3
XII.70	2-SCH2CH2C(CH3)CF2	5-COOH
XII.71	2-SCH2CH2C(CH3)CF2	5-COSCH2CH2C(CH3)CF2
XII.72	2-SCH2CH2C(CH3)CF2	5-CSNH2

XII.73	2-SCH2CH2C(CH3)CF2	5-H
XII.74	2-SOCH2CH2C(CH3)CF2	5-H
XII.75	2-SO2CH2CH2C(CH3)CF2	5-H
XII.76	2-SCH2CH2C(CH3)CF2	5-N(SO2CH3)2
XII.77	2-SCH2CH2C(CH3)CF2	5-NHCH2CH3
XII.78	2-SCH2CH2C(CH3)CF2	5-NHCHO
XII.79	2-SCH2CH2C(CH3)CF2	5-NHCOOCH3
XII.80	2-SCH2CH2C(CH3)CF2	5-NHCOCF3
XII.81	2-SOCH2CH2C(CH3)CF2	5-NHCOCF3
XII.82	2-SCH2CH2C(CH3)CF2	5-NHCOCH3
XII.83	2-SO2CH2CH2C(CH3)CF2	5-NHCOCH3
XII.84	2-SCH2CH2C(CH3)CF2	5-NHCSCH2CH3
XII.85	2-SCH2CH2C(CH3)CF2	5-NHCSNHCH2CH3
XII.86	2-SCH2CH2C(CH3)CF2	5-NHSO2CH3
XII.87	2-SCH2CH2C(CH3)CF2	5-OCF2CF2H
XII.88	2-SCH2CH2C(CH3)CF2	5-OCF3
XII.89	2-SOCH2CH2C(CH3)CF2	5-OCF3
XII.90	2-SCH2CH2C(CH3)CF2	5-OCH2C6H5
XII.91	2-SO2CH2CH2C(CH3)CF2	5-OCH2C6H5
XII.92	2-SCH2CH2C(CH3)CF2	5-OCH2CF3
XII.93	2-SOCH2CH2C(CH3)CF2	5-OCH2CF3
XII.94	2-SO2CH2CH2C(CH3)CF2	5-OCH2CF3
XII.95	2-SCH2CH2C(CH3)CF2	5-OCH2CH=CCl2
XII.96	2-SCH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XII.97	2-SOCH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XII.98	2-SO2CH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XII.99	2-SCH2CH2C(CH3)CF2	5-OCH2CH2F
XII.100	2-SCH2CH2C(CH3)CF2	5-OCH2COOH
XII.101	2-SCH2CH2C(CH3)CF2	5-OCH3
XII.102	2-SCH2CH2C(CH3)CF2	5-OCOC6H5
XII.103	2-SCH2CH2C(CH3)CF2	5-OCOCH3
XII.104	2-SCH2CH2C(CH3)CF2	5-OC6H5

XII.105	2-SOCH2CH2C(CH3)CF2	5-OC6H5
XII.106	2-SO2CH2CH2C(CH3)CF2	5-OC6H5
XII.107	2-SCH2CH2C(CH3)CF2	5-OSO2CH3
XII.108	2-SOCH2CH2C(CH3)CF2	5-OSO2CH3
XII.109	2-SCH2CH2C(CH3)CF2	5-SCF3
XII.110	2-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XII.111	2-SCH2CH2C(CH3)CF2	5-SCH3
XII.112	2-SCH2CH2C(CH3)CF2	5-SO2CF3
XII.113	2-SO2CH2CH2C(CH3)CF2	5-SO2CF3
XII.114	2-SCH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
XII.115	2-SO2CH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
XII.116	2-SCH2CH2C(CH3)CF2	5-SO2CH3
XII.117	2-SCH2CH2C(CH3)CF2	5-SO2N(CH3)2
XII.118	2-SCH2CH2C(CH3)CF2	5-SO2NH2
XII.119	2-SCH2CH2C(CH3)CF2	5-SO2NHCH3
XII.120	2-SO2CH2CH2C(CH3)CF2	5-SO2NHCH3
XII.121	2-SCH2CH2C(CH3)CF2	5-SOCF3
XII.122	2-SOCH2CH2C(CH3)CF2	5-SOCF3
XII.123	2-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XII.124	2-SOCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XII.125	2-SO2CH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XII.126	2-SCH2CH2C(CH3)CF2	5-SOCH3
XII.127	2-SO2CH2CH2C(CH3)CF2	5-SOCH3
XII.128	2-SCH2CH2C(CH3)CF2	5-(2-CH3-C6H4)
XII.129	2-SOCH2CH2C(CH3)CF2	5-(2-CH3-C6H4)
XII.130	2-SO2CH2CH2C(CH3)CF2	5-(2-CH3-C6H4)
XII.131	2-SCH2CH2C(CH3)CF2	5-(2-Furyl)
XII.132	2-SCH2CH2C(CH3)CF2	5-(2-OCH3-C6H4)
XII.133	2-SCH2CH2C(CH3)CF2	5-(2-Thiophenyl)
XII.134	2-SCH2CH2C(CH3)CF2	5-(3-Furyl)
XII.135	2-SCH2CH2C(CH3)CF2	5-(4-CF3-C6H4)
XII.136	2-SO2CH2CH2C(CH3)CF2	5-(4-CF3-C6H4)

XII.137	2-SCH2CH2C(CH3)CF2	5-(4-CH3-C6H4)
XII.138	2-SCH2CH2C(CH3)CF2	5-(4-CN-C6H4)
XII.139	2-SCH2CH2C(CH3)CF2	5-(4-CONH2-C6H4)
XII.140	2-SO2CH2CH2C(CH3)CF2	5-(4-CONH2-C6H4)
XII.141	2-SCH2CH2C(CH3)CF2	5-(4-NO2-C6H4)
XII.142	2-SOCH2CH2C(CH3)CF2	5-(4-NO2-C6H4)
XII.143	2-SO2CH2CH2C(CH3)CF2	5-(4-NO2-C6H4)
XII.144	2-SCH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)
XII.145	2-SOCH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)
XII.146	2-SO2CH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)
XII.147	2-SCH2CH2C(CH3)CF2	5-(4-OH-C6H4)
XII.148	2-SCH2CH2C(CH3)CF2	5-(4-Pyridinyl)

Examples of compounds of Formula (XIII) according to the invention are set out in Table XIII.

## TABLE XIII

No.	R2	R5
XIII.1	2-SCH2CH2C(CH3)CF2	5-Br
XIII.2	2-SO2CH2CH2C(CH3)CF2	5-Br
XIII.3	2-SCH2CH2C(CH3)CF2	5-C(CH3)3
XIII.4	2-SO2CH2CH2C(CH3)CF2	5-C(CH3)3
XIII.5	2-SCH2CH2C(CH3)CF2	5-C(O)C6H5
XIII.6	2-SCH2CH2C(CH3)CF2	5-c-C3H5
XIII.7	2-SO2CH2CH2C(CH3)CF2	5-c-C3H5
XIII.8	SCH2CH2C(CH3)CF2	5-C°CH
XIII.9	2-SCH2CH2C(CH3)CF2	5-C6H5
XIII.10	2-SOCH2CH2C(CH3)CF2	5-C6H5
XIII.11	2-SO2CH2CH2C(CH3)CF2	5-C6H5
XIII.12	2-SCH2CH2C(CH3)CF2	5-CF2H

XIII.13	2-SOCH2CH2C(CH3)CF2	5-CF2H
XIII.14	2-SCH2CH2C(CH3)CF2	5-CF3
XIII.15	2-SO2CH2CH2C(CH3)CF2	5-CF3
XIII.16	2-SCH2CH2C(CH3)CF2	5-CH(CH3)2
XIII.17	2-SO2CH2CH2C(CH3)CF2	5-CH(CH3)2
XIII.18	2-SCH2CH2C(CH3)CF2	5-CH=CH2
XIII.19	2-SCH2CH2C(CH3)CF2	5-CH2Br
XIII.20	2-SCH2CH2C(CH3)CF2	5-CH2C6H5
XIII.21	2-SOCH2CH2C(CH3)CF2	5-CH2C6H5
XIII.22	2-SO2CH2CH2C(CH3)CF2	5-CH2C6H5
XIII.23	2-SCH2CH2C(CH3)CF2	5-CH2CF3
XIII.24	2-SCH2CH2C(CH3)CF2	5-CH2CH2F
XIII.25	2-SOCH2CH2C(CH3)CF2	5-CH2CH2F
XIII.26	2-SO2CH2CH2C(CH3)CF2	5-CH2CH2F
XIII.27	2-SCH2CH2C(CH3)CF2	5-CH2CH3
XIII.28	2-SOCH2CH2C(CH3)CF2	5-CH2CH3
XIII.29	2-SO2CH2CH2C(CH3)CF2	5-CH2CH3
XIII.30	2-SCH2CH2C(CH3)CF2	5-CH2CHCH2
XIII.31	2-SCH2CH2C(CH3)CF2	5-CH2CN
XIII.32	2-SCH2CH2C(CH3)CF2	5-CH2CONH2
XIII.33	2-SCH2CH2C(CH3)CF2	5-CH2COOCH2CH3
XIII.34	2-SCH2CH2C(CH3)CF2	5-CH2N(CH3)2
XIII.35	2-SCH2CH2C(CH3)CF2	5-CH2OCH3
XIII.36	2-SOCH2CH2C(CH3)CF2	5-CH2OCH3
XIII.37	2-SO2CH2CH2C(CH3)CF2	5-CH2OCH3
XIII.38	2-SCH2CH2C(CH3)CF2	5-CH2OH
XIII.39	2-SCH2CH2C(CH3)CF2	5-CH2SO2C6H5
XIII.40	2-SCH2CH2C(CH3)CF2	5-CH3
XIII.41	2-SOCH2CH2C(CH3)CF2	5-CH3
XIII.42	2-SO2CH2CH2C(CH3)CF2	5-CH3
XIII.43	2-SCH2CH2C(CH3)CF2	5-COCH3
XIII.44	2-SCH2CH2C(CH3)CF2	5-CON(CH3)2

XIII.45	2-SCH2CH2C(CH3)CF2	5-CONH2
XIII.46	2-SCH2CH2C(CH3)CF2	5-CONHCH2C6H5
XIII.47	2-SCH2CH2C(CH3)CF2	5-CONHCH2CH2C(CH3)CF2
XIII.48	2-SOCH2CH2C(CH3)CF2	5-CONHCH2CH2C(CH3)CF2
XIII.49	2-SO2CH2CH2C(CH3)CF2	5-CONHCH2CH2C(CH3)CF2
XIII.50	2-SCH2CH2C(CH3)CF2	5-CONHCH3
XIII.51	2-SCH2CH2C(CH3)CF2	5-CONHSO2CH3
XIII.52	2-SO2CH2CH2C(CH3)CF2	5-CONHSO2CH3
XIII.53	2-SCH2CH2C(CH3)CF2	5-COOC6H5
XIII.54	2-SOCH2CH2C(CH3)CF2	5-COOC6H5
XIII.55	2-SCH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XIII.56	2-SOCH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XIII.57	2-SO2CH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)CF2
XIII.58	2-SCH2CH2C(CH3)CF2	5-COOCH2CH2F
XIII.59	2-SCH2CH2C(CH3)CF2	5-COOCH3
XIII.60	2-SCH2CH2C(CH3)CF2	5-COOH
XIII.61	2-SCH2CH2C(CH3)CF2	5-COSCH2CH2C(CH3)CF2
XIII.62	2-SCH2CH2C(CH3)CF2	5-CSNH2
XIII.63	2-SCH2CH2C(CH3)CF2	5-H
XIII.64	2-SOCH2CH2C(CH3)CF2	5-H
XIII.65	2-SO2CH2CH2C(CH3)CF2	5-H
XIII.66	2-SCH2CH2C(CH3)CF2	5-N(CH3)2
XIII.67	2-SCH2CH2C(CH3)CF2	5-N(SO2CH3)2
XIII.68	2-SO2CH2CH2C(CH3)CF2	5-N(SO2CH3)2
XIII.69	2-SCH2CH2C(CH3)CF2	5-NH2
XIII.70	2-SCH2CH2C(CH3)CF2	5-NHCH3
XIII.71	2-SOCH2CH2C(CH3)CF2	5-NHCH3
XIII.72	2-SO2CH2CH2C(CH3)CF2	5-NHCH3
XIII.73	2-SCH2CH2C(CH3)CF2	5-NHCHO
XIII.74	2-SOCH2CH2C(CH3)CF2	5-NHCHO
XIII.75	2-SCH2CH2C(CH3)CF2	5-NHCOCF3
XIII.76	2-SO2CH2CH2C(CH3)CF2	5-NHCOCF3

XIII.77	2-SCH2CH2C(CH3)CF2	5-NHCOCH3
XIII.78	2-SCH2CH2C(CH3)CF2	5-NHCOOCH3
XIII.79	2-SOCH2CH2C(CH3)CF2	5-NHCOOCH3
XIII.80	2-SCH2CH2C(CH3)CF2	5-NHCSCH2CH3
XIII.81	2-SCH2CH2C(CH3)CF2	5-NHCSNHCH2CH3
XIII.82	2-SCH2CH2C(CH3)CF2	5-NHSO2CH3
XIII.83	2-SO2CH2CH2C(CH3)CF2	5-NHSO2CH3
XIII.84	2-SCH2CH2C(CH3)CF2	5-OC6H5
XIII.85	2-SOCH2CH2C(CH3)CF2	5-OC6H5
XIII.86	2-SO2CH2CH2C(CH3)CF2	5-OC6H5
XIII.87	2-SCH2CH2C(CH3)CF2	5-OCF2CF2H
XIII.88	2-SCH2CH2C(CH3)CF2	5-OCF3
XIII.89	2-SOCH2CH2C(CH3)CF2	5-OCF3
XIII.90	2-SO2CH2CH2C(CH3)CF2	5-OCF3
XIII.91	2-SCH2CH2C(CH3)CF2	5-OCH2C6H5
XIII.92	2-SCH2CH2C(CH3)CF2	5-OCH2CF3
XIII.93	2-SOCH2CH2C(CH3)CF2	5-OCH2CF3
XIII.94	2-SO2CH2CH2C(CH3)CF2	5-OCH2CF3
XIII.95	2-SCH2CH2C(CH3)CF2	5-OCH2CH=CCl2
XIII.96	2-SCH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XIII.97	2-SOCH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XIII.98	2-SO2CH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2
XIII.99	2-SCH2CH2C(CH3)CF2	5-OCH2CH2F
XIII.100	2-SCH2CH2C(CH3)CF2	5-OCH2COOCH3
XIII.101	2-SCH2CH2C(CH3)CF2	5-OCH3
XIII.102	2-SOCH2CH2C(CH3)CF2	5-OCH3
XIII.103	2-SO2CH2CH2C(CH3)CF2	5-OCH3
XIII.104	2-SCH2CH2C(CH3)CF2	5-OCOC6H5
XIII.105	2-SCH2CH2C(CH3)CF2	5-OCOCH3
XIII.106	2-SCH2CH2C(CH3)CF2	5-OSO2CH3
XIII.107	2-SOCH2CH2C(CH3)CF2	5-OSO2CH3
XIII.108	2-SO2CH2CH2C(CH3)CF2	5-OSO2CH3

XIII.109	2-SCH2CH2C(CH3)CF2	5-SCF3
XIII.110	2-SCH2CH2C(CH3)CF2	5-SCH2(3-CF3C6H4)
XIII.111	2-SOCH2CH2C(CH3)CF2	5-SCH2(3-CF3C6H4)
XIII.112	2-SO2CH2CH2C(CH3)CF2	5-SCH2(3-CF3C6H4)
XIII.113	2-SCH2CH2C(CH3)CF2	5-SCH2(4-CF3-C+H4)
XIII.114	2-SCH2CH2C(CH3)CF2	5-SCH2(c-C3H5)
XIII.115	2-SCH2CH2C(CH3)CF2	5-SCH2C°CH
XIII.116	2-SCH2CH2C(CH3)CF2	5-SCH2CH=CH2
XIII.117	2-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XIII.118	2-SOCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2
XIII.119	2-SCH2CH2C(CH3)CF2	5-SCH3
XIII.120	2-SOCH2CH2C(CH3)CF2	5-SCH3
XIII.121	2-SO2CH2CH2C(CH3)CF2	5-SCH3
XIII.122	2-SCH2CH2C(CH3)CF2	5-SH
XIII.123	2-SCH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
XIII.124	2-SO2CH2CH2C(CH3)CF2	5-SO2CH2CH2C(CH3)CF2
XIII.125	2-SCH2CH2C(CH3)CF2	5-SO2CH3
XIII.126	2-SO2CH2CH2C(CH3)CF2	5-SO2CH3
XIII.127	2-SCH2CH2C(CH3)CF2	5-SO2N(CH3)2
XIII.128	2-SCH2CH2C(CH3)CF2	5-SO2NH2
XIII.129	2-SCH2CH2C(CH3)CF2	5-SO2NHCH3
XIII.130	2-SCH2CH2C(CH3)CF2	5-SOCF3
XIII.131	2-SOCH2CH2C(CH3)CF2	5-SOCF3
XIII.132	2-SCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XIII.133	2-SOCH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XIII.134	2-SO2CH2CH2C(CH3)CF2	5-SOCH2CH2C(CH3)CF2
XIII.135	2-SCH2CH2C(CH3)CF2	5-SOCH3
XIII.136	2-SCH2CH2C(CH3)CF2	5-(4-CF3-C6H4)
XIII.137	2-SO2CH2CH2C(CH3)CF2	5-(4-CF3-C6H4)
XIII.138	2-SCH2CH2C(CH3)CF2	5-(4-CH3-C6H4)
XIII.139	2-SO2CH2CH2C(CH3)CF2	5-(4-CH3-C6H4)
XIII.140	2-SCH2CH2C(CH3)CF2	5-(4-CN-C6H4)

XIII.141	2-SOCH2CH2C(CH3)CF2	5-(4-CN-C6H4)
XIII.142	2-SCH2CH2C(CH3)CF2	5-(4-CONH2-C6H4)
XIII.143	2-SCH2CH2C(CH3)CF2	5-(4-H2NSO2-C6H4)
XIII.144	2-SCH2CH2C(CH3)CF2	5-(4-NO2-C6H4)
XIII.145	2-SCH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)
XIII.146	2-SOCH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)
XIII.147	2-SO2CH2CH2C(CH3)CF2	5-(4-OCH3-C6H4)

Examples of compounds of Formula (XIV) according to the invention are set out in Table XIV.

#### TABLE XIV

No.	R1	R5
XIV.1	1-CH3	5-SCH2CH2C(CH3)CF2

Examples of compounds of Formula (XV) according to the invention are set out in Table XV.

#### TABLE XV

No.	R1	R2	R3	R4
XV.1	1-SCH2CH2C(CH3)CF2	2-H	3-H	4-NO2

Examples of compounds of Formula (XVI) according to the invention are set out in Table XVI.

TABLE XVI

<b>1</b> 86	11-9	6-1:	6-F	:1-9	11-9	11-9	11-9	11-9	6-11	11-9	11-9	11-9	11-9	11-9	11-9
RS	5-H	5-F	<b>5-F</b>	5-F	<b>S-II</b>	5-11	S-ii	2-11	5-11	3.11	5-CF3	5-Cl <sup>3</sup>	S-CI	5-CI	S-CN
	4-SCH2CH2C(CH3)CF2	4-SCII2CH2C(CH3)CF2	4-SOCH2CH2C(CH3)CF2	4-SO2CH2CI\12C(CH3)CF2	4-SCH2CH2C(CH3)CF2	4-SO2CH2CH2C(CH3)CF2 5-11				4-11					
84	4-SC	4-SC	4-SO	4-SO	4-SC	4-SO	4-11	4-11	4-11	3H3)CF2	4-11	4-H	4-11	4-11	11-7
ន	3-11	3-F	3-F	:- :- :-	3-11	3-11	3-CF3	3-CN	3-CONII2	3-COOCH2CH2C(CH3)CF2	3-11	3-H	3-11	3-11	3-11
R2 R	2-Cl 3-	2.1:	2-F		2.11	2-11 3	2-SCH2CH2C(CH3)CF2	2:SCH2CH2C(CH3)CF2	2.SCH2CH2C(CH3)CF2	XVL10 2-SCH2CH2C(CH3)CF2	XVI.11 2-SCH2CH2C(CH3)CF2	XVI.12 2-SO2CH2CH2C(CH3)CF2	XVI 13 2-SCH2CH2C(CH3)CF2	NVLL4 2-SO2CH2CH2C(CH3)CF2	XVI 15 2-SC112C112C1C113)C1:2
Š.	XVII	XVI.2						X.VI.8		XVI.10	XVI.II	XVI.12	XVI 1.3	NVLLI	XVI 15

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- 1

0-11	H-9	H-9	Н-9	11-9	11-9	11-9	6-F	11-9	
5-CN	5-CONI12	5-COOH	У-У-	5-11	5-NO2	5-SCH2CH2C(CH3)CF2	5-11	S-H	
4-11	4-11	4-11	4-11	4-11	4-H	4-H	4-H	4-H	
3-11	3-H	3-11	3-Н	3-11	3-11	3-H	3-11	3-NO2	
XVL16 2-SO2CH2CH2C(CH3)CH2	XVI.17 2-SCH2CH2C(CH3)CF2	XVI.18 2-SCH2CH2C(CH3)CF2	XVI.19 2-SCH2CH2C(CH3)CF2	XVI.20 2-SO2CH2CH2C(CH3)CF2	XVI.21 2-SCH2CH2C(CH3)CF2	XVI.22 2-SCH2CH2C(CH3)CF2	XVI.23 2-SCI12CI12C(CH3)CF2	XVI.24 2-SCI12CH2C(CH3)CF2	

Examples of compounds of Formula (XVII) according to the invention are set out in Table XVII.

#### **TABLE XVII**

No.	R3	R4	R5	R6
XVII.1	3-SCH2CH2C(CH3)CF2	4-H	5-H	6-CH3
XVII.2	3-SCH2CH2C(CH3)CF2	4-H	5-H	6-Cl
XVII.3	3-SCH2CH2C(CH3)CF2	4-H	5-H	6-OCH3
XVII.4	3-SCH2CH2C(CH3)CF2	4-H	5-H	6-C6H5
XVII.5	3-SOCH2CH2C(CH3)CF2	4-H	5-H	6-C6H5
XVII.6	3-SO2CH2CH2C(CH3)CF2	4-H	5-H	6-C6H5
XVII.7	3-SCH2CH2C(CH3)CF2	-CH=CH-CH=C	H-	6-H

Examples of compounds of Formula (XVIII) according to the invention are set out in Table XVIII.

#### **TABLE XVIII**

No.	R2	R3	R5	R6
XVIII.1	2-SCH2CH2C(CH3)CF2	3-H	-CH=CH-CH	I=CH-
XVIII.2	2-SOCH2CH2C(CH3)CF2	3-H	-CH=CH-CH	I=CH-
XVIII.3	2-SO2CH2CH2C(CH3)CF2	3-H	-CH=CH-CF	I=CH-
XVIII.4	2-SCH2CH2C(CH3)CF2	3-H	-CH=C(Cl)C	H=CH-
XVIII.5	2-SOCH2CH2C(CH3)CF2	3-H	-CH=C(Cl)C	H=CH-
XVIII.6	2-SO2CH2CH2C(CH3)CF2	3-Н	-CH=C(Cl)C	H=CH-
XVIII.7	2-SCH2CH2C(CH3)CF2	3-H	5-H	6-H
XVIII.8	2-SOCH2CH2C(CH3)CF2	3-H	5-H	6-H
XVIII.9	2-SO2CH2CH2C(CH3)CF2	3-H	5-H	6-H
XVIII.10	2-SCH2CH2C(CH3)CF2	3-Cl	5-H	6-H
XVIII.11	2-SOCH2CH2C(CH3)CF2	3-Cl	5-H	6-H
XVIII.12	2-SO2CH2CH2C(CH3)CF2	3-Cl	5-H	6-H

XVIII.13	2-SCH2CH2C(CH3)CF2 3-Se	CH2CH2C(C	CH3)CF2 5-H	6-H
XVIII.14	2-SCH2CH2C(CH3)CF2	3-H	5-H	6-Cl
XVIII.15	2-SOCH2CH2C(CH3)CF2	3-H	5-H	6-Cl
XVIII.16	2-SO2CH2CH2C(CH3)CF2	3-H	5-H	6-CI

Examples of compounds of Formula (XIX) according to the invention are set out in Table XIX.

#### TABLE XIX

No.	R4	R5	R6
XIX.1	4-SCH2CH2C(CH3)CF2	-CH=CH-CH:	=CH-

Examples of compounds of Formula (XX) according to the invention are set out in Table XX.

#### TABLE XX

No	R3	R5	R6
No.	KJ	KJ	1.0
XX.1	3-SCH2CH2C(CH3)CF2	5-Br	6-H
XX.2	3-SCH2CH2C(CH3)CF2	5-c-C3H5	6-H
XX.3	3-SOCH2CH2C(CH3)CF2	5-c-C3H5	6-H
XX.4	3-SCH2CH2C(CH3)CF2	5-C6H5	6-CH3
XX.5	3-SOCH2CH2C(CH3)CF2	5-C6H5	6-CH3
XX.6	3-SO2CH2CH2C(CH3)CF2	5-C6H5	6-CH3
XX.7	3-SOCH2CH2C(CH3)CF2	5-C6H5	6-CN
XX.8	3-SCH2CH2C(CH3)CF2	5-C6H5	6-H
XX.9	3-SO2CH2CH2C(CH3)CF2	5-C6H5	6-H
XX.10	3-SCH2CH2C(CH3)CF2	5-(4-F-C6H4)	6-H
XX.11	3-SOCH2CH2C(CH3)CF2	5-(4-F-C6H4)	6-H
XX.12	3-SCH2CH2C(CH3)CF2	5-CF2H	6-CH3
XX.13	3-SCH2CH2C(CH3)CF2	5-CF3	6-H

XX.14	3-SOCH2CH2C(CH3)CF2	5-CF3	6-OC6H5
XX.15	3-SCH2CH2C(CH3)CF2	5-CH(CH3)2	6-H
XX.16	3-SCH2CH2C(CH3)CF2	5-CH=CH2	6-H
XX.17	3-SCH2CH2C(CH3)CF2	5-CH=CHCN	6-H
XX.18	3-SCH2CH2C(CH3)CF2	5-CH=CHNO2	6-H
XX.19	3-SCH2CH2C(CH3)CF2	5-CH=NOCH3	6-CH3
XX.20	3-SCH2CH2C(CH3)CF2	5-CH2C°CH	6-H
XX.21	3-SCH2CH2C(CH3)CF2	5-CH2C6H5	6-H
XX.22	3-SOCH2CH2C(CH3)CF2	5-CH2C6H5	6-H
XX.23	3-SCH2CH2C(CH3)CF2	5-CH2CF3	6-H
XX.24	3-SCH2CH2C(CH3)CF2	5-CH2CH=CH2	6-H
XX.25	3-SCH2CH2C(CH3)CF2	5-CH2CH2CH2CH3	6-H
XX.26	3-SO2CH2CH2C(CH3)CF2	5-CH2CH2CH2CH3	6-H
XX.27	3-SCH2CH2C(CH3)CF2	5-CH2CH2CH3	6-H
XX.28	3-SO2CH2CH2C(CH3)CF2	5-CH2CH2CH3	6 <b>-H</b> .
XX.29	3-SCH2CH2C(CH3)CF2	5-CH2CH2F	6-H
XX.30	3-SCH2CH2C(CH3)CF2	5-CH2CH3	6-H
XX.31	3-SCH2CH2C(CH3)CF2	5-CH2CN	6-CH3
XX.32	3-SCH2CH2C(CH3)CF2	5-CH2CONH2	6-H
XX.33	3-SCH2CH2C(CH3)CF2	5-CH2N(CH3)2	6-CH3
XX.34	3-SCH2CH2C(CH3)CF2	5-CH2NHCOCH3	6-H
XX.35	3-SCH2CH2C(CH3)CF2	5-CH2OCH2CH3	6-H
XX.36	3-SOCH2CH2C(CH3)CF2	5-CH2OCH2CH3	6-H
XX.37	3-SCH2CH2C(CH3)CF2	5-CH2OCH3	6-CH3
XX.38	3-SCH2CH2C(CH3)CF2	5-CH2OH	6-H
XX.39	3-SCH2CH2C(CH3)CF2	5-CH2SO2C6H5	6-H
XX.40	3-SCH2CH2C(CH3)CF2	5-CH3	6-CF2H
XX.41	3-SCH2CH2C(CH3)CF2	5-CH3	6-CH=CH2
XX.42	3-SCH2CH2C(CH3)CF2	5-CH3	6-CH2CH2F
XX.43	3-SCH2CH2C(CH3)CF2	5-CH3	6-CH2CN
XX.44	3-SCH2CH2C(CH3)CF2	5-CH3	6-CH2N(CH3)2
XX.45	3-SCH2CH2C(CH3)CF2	5-CH3	6-СН2ОН

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XX.46	3-SCH2CH2C(CH3)CF2	5-CH3	6-CH3
XX.47	3-SCH2CH2C(CH3)CF2	5-CH3	6-CONH2
XX.48	3-SCH2CH2C(CH3)CF2	5-CH3	6-CONHCH3
XX.49	3-SCH2CH2C(CH3)CF2	5-CH3	6-CONHSO2CH3
XX.50	3-SCH2CH2C(CH3)CF2	5-CH3	6-COOCH2CH3
XX.51	3-SCH2CH2C(CH3)CF2	5-CH3	6-COOCH3
XX.52	3-SCH2CH2C(CH3)CF2	5-CH3	6-H
XX.53	3-SOCH2CH2C(CH3)CF2	5-CH3	6-H
XX.54	3-SO2CH2CH2C(CH3)CF2	5-CH3	6-H
XX.55	3-SCH2CH2C(CH3)CF2	5-CH3	6-NHCHO
XX.56	3-SCH2CH2C(CH3)CF2	5-CH3	6-NHCOCH3
XX.57	3-SCH2CH2C(CH3)CF2	5-CH3	6-NHCONH2
XX.58	3-SCH2CH2C(CH3)CF2	5-CH3	6-OCF2H
XX.59	3-SCH2CH2C(CH3)CF2	5-CH3	6-OCH2CF3
XX.60	3-SCH2CH2C(CH3)CF2	5-CH3	6-OCH2CH2F
XX.61	3-SCH2CH2C(CH3)CF2	5-CH3	6-OCOCH3
XX.62	3-SCH2CH2C(CH3)CF2	5-CH3	6-OSO2CH3
XX.63	3-SCH2CH2C(CH3)CF2	5-CH3	6-SO2NH2
XX.64	3-SCH2CH2C(CH3)CF2	5-CH3	6-SOCH3
XX.65	3-SCH2CH2C(CH3)CF2	5-CHCl2	6-H
XX.66	3-SCH2CH2C(CH3)CF2	5-CHO	6-CH3
XX.67	3-SCH2CH2C(CH3)CF2	5-Cl	6-H
XX.68	3-SO2CH2CH2C(CH3)CF2	5-Cl	6-H
XX.69	3-SCH2CH2C(CH3)CF2	5-CN	6-H
XX.70	3-SOCH2CH2C(CH3)CF2	5-CN	6-H
XX.71	3-SCH2CH2C(CH3)CF2	5-COCH3	6-H
XX.72	3-SCH2CH2C(CH3)CF2	5-CON(CH3)2	6-H
XX.73	3-SCH2CH2C(CH3)CF2	5-CONH2	6-H
XX.74	3-SCH2CH2C(CH3)CF2	5-CONHCH2C6H5	6-H
XX.75		5-CONHCH2CH2C(CH3	
XX.76	3-SCH2CH2C(CH3)CF2	5-CONHCH3	6-H
XX.77	3-SCH2CH2C(CH3)CF2	5-CONHSO2CH3	6-CH3

XX.78	3-SO2CH2CH2C(CH3)CF2	5-COOCH2CH2C(CH3)C	F2 6-H
XX.79	3-SCH2CH2C(CH3)CF2	5-COOCH2CH2F	6-H
XX.80	3-SCH2CH2C(CH3)CF2	5-COOCH2CH3	6-Н
XX.81	3-SCH2CH2C(CH3)CF2	5-COOCH3	6-CH3
XX.82	3-SOCH2CH2C(CH3)CF2	5-COOCH3	6-H
XX.83	3-SCH2CH2C(CH3)CF2	5-COOH	6-H
XX.84	3-SOCH2CH2C(CH3)CF2	5-COOH	6-H
XX.85	3-SCH2CH2C(CH3)CF2	5-F	6-H
XX.86	3-SCH2CH2C(CH3)CF2	5-H	6-(1-CH3-cC3H4)
XX.87	3-SCH2CH2C(CH3)CF2	5-H	6-(4-F-C6H4)
XX.88	3-SO2CH2CH2C(CH3)CF2	5-H	6-(4-F-C6H4)
XX.89	3-SCH2CH2C(CH3)CF2	5-H	6-Br
XX.90	3-SCH2CH2C(CH3)CF2	5-H	6-C(CH3)3
XX.91	3-SCH2CH2C(CH3)CF2	5-H	6-c-C3H5
XX.92	3-SCH2CH2C(CH3)CF2	5-H	6-c-C5H9
XX.93	3-SCH2CH2C(CH3)CF2	5-H	6-C°CH
XX.94	3-SCH2CH2C(CH3)CF2	5-H	6-C6H5
XX.95	3-SOCH2CH2C(CH3)CF2	5-H	6-C6H5
XX.96	3-SCH2CH2C(CH3)CF2	5-H	6-CF3
XX.97	3-SO2CH2CH2C(CH3)CF2	5-H	6-CF3
XX.98	3-SCH2CH2C(CH3)CF2	5-H	6-CH(CH3)2
XX.99	3-SCH2CH2C(CH3)CF2	5-H	6-CH=CHCN
XX.100	3-SCH2CH2C(CH3)CF2	5-H	6-CH=CHNO2
XX.101	3-SCH2CH2C(CH3)CF2	5-H	6-CH=NOCH3
XX.102	3-SOCH2CH2C(CH3)CF2	5-H	6-CH2(4-CF3-C6H4)
XX.103	3-SCH2CH2C(CH3)CF2	5-H	6-CH2C°CH
XX.104	3-SCH2CH2C(CH3)CF2	5-H	6-CH2C6H5
XX.105	3-SOCH2CH2C(CH3)CF2	5-H	6-CH2C6H5
XX.106	3-SCH2CH2C(CH3)CF2	5-H	6-CH2CF3
XX.107	3-SCH2CH2C(CH3)CF2	5-H	6-CH2CH=CH2
XX.108	3-SCH2CH2C(CH3)CF2	5-H	6-CH2CH2CH2CH3
XX.109	3-SCH2CH2C(CH3)CF2	5-H	6-CH2CH2CH3

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<b>XX.</b> 11	10 -3-SCH2CH2C(CH3)CF2	5-H	6-CH2CH3
XX.1	11 3-SCH2CH2C(CH3)CF2	5-H	6-CH2CONH2
<b>XX.</b> 1:	2 3-SCH2CH2C(CH3)CF2	5-H	6-CH2NHCOCH3
XX.1	3 3-SCH2CH2C(CH3)CF2	5-H	6-CH2OCH2CH3
<b>XX.</b> 11	4 3-SCH2CH2C(CH3)CF2	5-H	6-CH2OCH3
<b>XX.</b> 11	5 3-SCH2CH2C(CH3)CF2	5-H	6-CH2SO2C6H5
<b>XX.</b> 11	6 3-SCH2CH2C(CH3)CF2	5-H	6-CH3
<b>XX</b> .11	7 3-SOCH2CH2C(CH3)CF2	5-H	6-CH3
<b>XX</b> .11	8 3-SO2CH2CH2C(CH3)CF2	5-H	6-CH3
× XX.11	9 3-SCH2CH2C(CH3)CF2	- 5-H	6-CHO
XX.12	0 3-SCH2CH2C(CH3)CF2	5-H	6-Cl
XX.12	3-SOCH2CH2C(CH3)CF2	5-H	6-Cl
XX.12	2 3-SCH2CH2C(CH3)CF2	5-H	6-CN
XX.12	3 3-SCH2CH2C(CH3)CF2	5-H	6-COCH3
XX.12	4 3-SCH2CH2C(CH3)CF2	5-H	6-CON(CH3)2
XX.12	.5 3-SO2CH2CH2C(CH3)CF2	5-H	6-CON(CH3)C2H5
XX.12	6 3-SCH2CH2C(CH3)CF2	5-H	6-CONHCH2C6H5
XX.12	7 3-SCH2CH2C(CH3)CF2	5-H	6-CONHCH2CH2C(CH3)CF2
XX.12	8 3-SCH2CH2C(CH3)CF2	5-H	6-CONHCH2CH2CH3
XX.13	9 3-SCH2CH2C(CH3)CF2	5-H	6-COOC6H5
XX.13	0 3-SCH2CH2C(CH3)CF2	5-H	6-COOCH2CH2C(CH3)CF2
<b>XX</b> .13	1 3-SCH2CH2C(CH3)CF2	5-H	6-COOCH2CH2F
XX.13	2 3-SCH2CH2C(CH3)CF2	5-H	6-COOCH3
XX.13	3 3-SOCH2CH2C(CH3)CF2	5-H	6-COOCH3
XX.13	5 3-SO2CH2CH2C(CH3)CF2	5-H	6-COOH
<b>XX</b> .13	6 3-SCH2CH2C(CH3)CF2	5-H	6-F
XX.13	7 3-SCH2CH2C(CH3)CF2	5-H	6-H
XX.13	8 3-SCH2CH2C(CH3)CF2	5-H	6-NHCH2CH3
XX.13	9 3-SOCH2CH2C(CH3)CF2	5-H	6-NHCH2CH3
XX.14	0 3-SCH2CH2C(CH3)CF2	5-H	6-NHCOC2H5
XX.14	1 3-SCH2CH2C(CH3)CF2	5-H	6-NHCOC6H5
XX.14	2 3-SCH2CH2C(CH3)CF2	5-H	6-NHCOCF3
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XX.143	3-SCH2CH2C(CH3)CF2	5-H	6-NHCOCH3
XX.144	3-SCH2CH2C(CH3)CF2	5-H	6-NHCOOCH3
XX.145	3-SCH2CH2C(CH3)CF2	5-H	6-NHCSCH2CH3
XX.146	3-SCH2CH2C(CH3)CF2	5-H	6-NHCSNHCH2CH3
XX.147	3-SCH2CH2C(CH3)CF2	5-H	6-NHSO2CH3
XX.148	3-SCH2CH2C(CH3)CF2	5-H	6-NO2
XX.149	3-SCH2CH2C(CH3)CF2	5-H	6-OC4H9
XX.150	3-SOCH2CH2C(CH3)CF2	5-H	6-OC5H11
XX.151	3-SCH2CH2C(CH3)CF2	5-H	6-OC6H5
XX.152	3-SOCH2CH2C(CH3)CF2	5-H	6-OC6H5
XX.153	3-SCH2CH2C(CH3)CF2	5-H	6-OCF2CF2H
XX.154	3-SCH2CH2C(CH3)CF2	5-H	6-OCF3
XX.155	3-SOCH2CH2C(CH3)CF2	5-H	6-OCF3
XX.156	3-SO2CH2CH2C(CH3)CF2	5-H	6-OCH(CH3)C2H5
XX.157	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2(4-Cl-C6H4)
XX.158	3-SO2CH2CH2C(CH3)CF2	5-H	6-OCH2(4-Cl-C6H4)
XX.159	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2C6H5
XX.160	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CCI=CH2
XX.161	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH=CCl2
XX.162	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH=CH2
XX.163	3-SO2CH2CH2C(CH3)CF2	5-H	6-OCH2CH=CH2
XX.164	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH2CH3
XX.165	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH2COOCH3
XX.166	3-SOCH2CH2C(CH3)CF2	5-H	6-OCH2CH2COOCH3
XX.167	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH2C(CH3)CF2
XX.168	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2CH3
XX.169	3-SCH2CH2C(CH3)CF2	5-H	6-OCH2COOH
XX.170	3-SCH2CH2C(CH3)CF2	5-H	6-OCH3
XX.171	3-SOCH2CH2C(CH3)CF2	5-H	6-OCH3
XX.172	3-SCH2CH2C(CH3)CF2	5-H	6-OCOC2H5
XX.173	3-SCH2CH2C(CH3)CF2	5-H	6-OCOC6H5
XX.174	3-SCH2CH2C(CH3)CF2	5-H	6-OH

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XX.175	3-SOCH2CH2C(CH3)CF2	5-H	6-OH	
XX.176	3-SCH2CH2C(CH3)CF2	5-H	6-SCF3	
XX.177	3-SOCH2CH2C(CH3)CF2	5-H	6-SCF3	
XX.178	3-SCH2CH2C(CH3)CF2	5-H	6-SCH2CH2CH3	·
XX.179	3-SCH2CH2C(CH3)CF2	5-H	6-SCH2CH2C(CH3)CF2	
XX.180	3-SCH2CH2C(CH3)CF2	5-H	6-SCH3	·
XX.181	3-SOCH2CH2C(CH3)CF2	5-H	6-SCH3	
XX.182	3-SCH2CH2C(CH3)CF2	5-H	6-SO2NHCH3	
XX.183	3-SCH2CH2C(CH3)CF2	5-H	6-SOCF3	
XX.184	3-SCH2CH2C(CH3)CF2	5-H	6-SOCH2CH2C(CH3)CF2	
XX.185	3-SCH2CH2C(CH3)CF2	5-NH2	6-CH3	
XX.186	3-SO2CH2CH2C(CH3)CF2	5-NHCH2CH3	6-C6H5	
XX.187	3-SCH2CH2C(CH3)CF2	5-NHCH2CH3	6-Н	
XX.188	3-SCH2CH2C(CH3)CF2	5-NHCHO	6-Н	
XX.189	3-SCH2CH2C(CH3)CF2	5-NHCOCF3	6-CH3	
XX.190	3-SOCH2CH2C(CH3)CF2	5-NHCOCH3	6-C6H5	
XX.191	3-SCH2CH2C(CH3)CF2	5-NHCOCH3	6-H	
XX.192	3-SCH2CH2C(CH3)CF2	5-NHCONH2	6-CH3	
XX.193	3-SCH2CH2C(CH3)CF2	5-NHCOOCH3	6-Н	
XX.194	3-SCH2CH2C(CH3)CF2	5-NHSO2CH3	6-CH3	
XX.195	3-SCH2CH2C(CH3)CF2	5-NMe2	6-Н	
XX.196	3-SOCH2CH2C(CH3)CF2	5-NO2	6-C6H5	·
XX.197	3-SCH2CH2C(CH3)CF2	5-NO2	6-Н	
XX.198	3-SCH2CH2C(CH3)CF2	5-OC6H5	6-Н	
XX.199	3-SOCH2CH2C(CH3)CF2	5-OC6H5	6-Н	
XX.200	3-SOCH2CH2C(CH3)CF2	5-OC6H5	6-NHCOCH3	
XX.201	3-SCH2CH2C(CH3)CF2	5-OCF2CF2H	6-CH3	
XX.202	3-SCH2CH2C(CH3)CF2	5-OCF2H	6-H	
XX.203	3-SCH2CH2C(CH3)CF2	5-OCF3	6-H	
XX.204	3-SOCH2CH2C(CH3)CF2	5-OCF3	6-H	
XX.205	3-SCH2CH2C(CH3)CF2	5-OCH(CH3)2	6-H	
XX.206	3-SOCH2CH2C(CH3)CF2	5-OCH(CH3)C2H5	5 6-Н	

XX.207	3-SCH2CH2C(CH3)CF2	5-OCH2(4-Cl-C6H4)	6-H
XX.208	3-SO2CH2CH2C(CH3)CF2	5-OCH2(4-Cl-C6H4)	6-H
XX.209	3-SCH2CH2C(CH3)CF2	5-OCH2C6H5	6-H
XX.210	3-SCH2CH2C(CH3)CF2	5-OCH2CCI=CH2	6-H
XX.211	3-SCH2CH2C(CH3)CF2	5-OCH2CF3	6-H
XX.212	3-SCH2CH2C(CH3)CF2	5-OCH2CH=CH2	6-H
XX.213	3-SO2CH2CH2C(CH3)CF2	5-OCH2CH2COOCH3	6-CH3
XX.214	3-SCH2CH2C(CH3)CF2	5-OCH2CH2COOCH3	6-H
XX.215	3-SO2CH2CH2C(CH3)CF2	5-OCH2CH2COOCH3	6-H
XX.216	3-SCH2CH2C(CH3)CF2	5-OCH2CH2C(CH3)CF2	6-H
XX.217	3-SCH2CH2C(CH3)CF2	5-OCH2CH2F	6-CH3
XX.218	3-SCH2CH2C(CH3)CF2	5-OCH2CH3	6-H
XX.219	3-SCH2CH2C(CH3)CF2	5-OCH2COOCH3	6-H
XX.220	3-SCH2CH2C(CH3)CF2	5-OCH2COOH	6-H
XX.221	3-SCH2CH2C(CH3)CF2	5-OCH3	6-H
XX.222	3-SCH2CH2C(CH3)CF2	5-OCOC2H5	6-H
XX.223	3-SOCH2CH2C(CH3)CF2	5-OCOC6H5	6-H
XX.224	3-SCH2CH2C(CH3)CF2	5-OCOCH3	6-CH3
XX.225	3-SOCH2CH2C(CH3)CF2	5-OH	6-C6H5
XX.226	3-SCH2CH2C(CH3)CF2	5-OH	6-CH3
XX.227	3-SCH2CH2C(CH3)CF2	5-OH	6-H
XX.228	3-SCH2CH2C(CH3)CF2	5-OSO2CH3	6-H
XX.229	3-SCH2CH2C(CH3)CF2	5-SCF3	6-H
XX.230	3-SOCH2CH2C(CH3)CF2	5-SCF3	6-H
XX.231	3-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	6-H
XX.232	3-SCH2CH2C(CH3)CF2	5-SCH2CH2CH3	6-H
XX.233	3-SCH2CH2C(CH3)CF2	5-SCH2CH2C(CH3)CF2	6-H
XX.234	3-SCH2CH2C(CH3)CF2	5-SCH3	6-H
XX.235	3-SOCH2CH2C(CH3)CF2	5-SCH3	6-H
XX.236	3-SCH2CH2C(CH3)CF2	5-SO2NH2	6-CH3
XX.237	3-SCH2CH2C(CH3)CF2	5-SO2NHCH3	6-H
XX.238	3-SCH2CH2C(CH3)CF2	5-SOCF3	6-H

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VV 120	3-SCH2CH2C(CH3)CF2	5-SOCH3	6-CH3
XX.239		5-CH3	6-SCH2CH2C(CH3)CF2
XX.240	3-CH3	5-H	6-SCH2CH2C(CH3)CF2
XX.241	3-CH3		6-SO2CH2CH2C(CH3)CF2
XX.242	3-CH3	5-OC4H9	
XX.243	3-CH3	5-SCH2CH2C(CH3)C	F2 6-CH3
XX.244	3-CH3	5-SCH2CH2C(CH3)C	
XX.245	3-H	5-CH3	6-SCH2CH2C(CH3)CF2
XX.246	3-Н	5-H	6-CH2CH2C(CH3)CF2
XX.247	3-H	5-SCH2CH2C(CH3)C	F2 6-CH3
•	3-H	5-SCH2CH2C(CH3)C	CF2 6-H
XX.248		5-SOCH2CH2C(CH3	
XX.249	3-H		
XX.250	3-H	5-SO2CH2CH2C(CH	5,6.2
XX.251	3-SCH2CH2C(CH3)CF2	-(CH2CH2CH2CI	•
XX.252	3-SOCH2CH2C(CH3)CF2	-(CH2CH2CH2C	H2)-
XX.253	3-SO2CH2CH2C(CH3)CF2	-(CH2CH2CH2C	H2)-

Examples of compounds of Formula (XXI) according to the invention are set out in Table XXI.

## TABLE XXI

No.	R2	R4	K6
	2-SCH2CH2C(CH3)CF2	4-H	6-H

	R8	8-11	8-F		8-11	8-11	8-11	8-H	8-11	8-11	8-CN	8-11	8-11	8-11	8-H	8-CI	H-8	8-11	8-CH2OCH3
ı XX	R7	7-11	7-11		7-CH3	7-NHCOCH3	7-11	7-C00H	7-F	7-11	7-11	7-11	7-11	7-CI	7-cC3H5-1-CH3	7-OH	7-OCI12CF3	7-0CH2CH3	7-11
TABLEXXII	186		Н-9		11-9	11-9	11-9	Н-9	11-9	11-9	11-9	6-CH3	6-CI	ID-9	11-9	11-9	11-9	11-9	11-9
	RS	5-11	5-11		5-11	5-11	5-11	5-11	5-11	4-CH3	5-11	5-H	5-11	5-11	5-11	5-11	5-11	5-11	3-11
	R2	2-SCH2CH2C(CH3)CF2		SO2CH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SOCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCII2CII2C(CII3)CF2	2-SOC112C112C(C113)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCI12C112C(C113)CF2	2-SOC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2
	Š	XXII.1	XXII.2		XXII.3	THXX	XXII.5	XXII.6	XXII.7	XXII.8	XXII.9	XXII.10	XXII.11	XXII.12	XXII.13	XXII.14	XXII.15	XXII.16	XXII.17

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8-11	8-11	8-11	8-11	H-8	8-11	8-11	H-8	8-11	8-11	8-11	8-11	8-11	H-8	H-8	8-11	<del>1</del> -8	<b>-8</b>	8-11	8-11	8-11
=CII-	7-CI	7-NHCOC2115	7-NHSO2CH3	7-NO2	7-OC2H5	7-0CH3	7-0CH3	7-11	7-11	7-11	7-H	7-11	7-11	7-11	7-11	7-11	7-11	7-11	7-11	7-11
-CII=CII·CII=CII-	. 11-9	H-9	11-9	11-9	11-9	11-9	11-9	6-Br	6-CF3	1 <b>-</b> 9	6-C00C112C112C11CF2	6-CONII2	6-COCNCI12CI12CI13	6-CON(CH3)2	11002-9	6-F	6-NIICOC6H5	6-ОСН3	6-SCI13	6-S02CI13
5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-CI	11-5	5-14	5-11	5-11	5-11	5-11	5-11	5-11	S-H	5-11	5-11	5-11	5.11
2-SCH2CH2C(CH3)CF2	2 SCH2CH2C(CH3)CF2	2-SC112C112C(C113)C1 <sup>2</sup> 2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12C112C(CH3)CF2	2-SC112C112C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2
XXII.18	8XII.19	XXII.20	XXII.21	XXII.22	XXII.23	XXII.24	XXII.25	XX11.26	XXII.27	XXII.28	XXII.29	XXII.30	XXII.31	XXII.32	XXII.33	XXII.34	XXII.35	XXII.36	XXII.37	NNII.38

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		- 74 -				
98.IIXX	2-SCH2CH2C(CH3)CF2	5-11	6-SO2N(CH3)2	7-11	8-11	
OF.II.XX	2-SCH2CH2C(CH3)CF2	5-11	11-9	7-11	8-CI	
XXII.41	2-SCH2CH2C(CH3)CF2	5-11	11-9	7-SCI13	11-8	
XXII.42	2-SOCH2CH2C(CH3)CF2	5-11	6-Br	7-11	8-11	
XXII.43		5-11	6-Br	7-H	8-11	
	SO2CH2CH2C(CH3)CF2					
XXII.14	2-SCH2CH2C(CH3)CF2	S-II	6-CN	7-11	8-11	
XXII.45	2-SOC112C112C(C113)CF2	5-11	6-COOCH2CH2CHCF2	7-11	8-11	
NXII.46		5-11	6-COOCH2CH2CHCF2	7-11	8-11	
	SO2CH2CH2C(CH3)CF2					
XXII.47	2-SOCH2CH2C(CH3)CF2	5-11	6-F	7-11	11-8	
XXII.48	2-SCH2CH2C(CH3)CF2	5-11	6-OCF3	7-H	8-11	
01.11XX	2-SCH2CH2C(CH3)ĆF2	5-11	11-9	7-SO2NI12	8-11	
XXII.50	2-SC112C112C(C113)CF2_	5-11	11-9	7-S02NI12	8-11	
XXII.51	2-SCH2CH2C(CH3)CF2	5-11	6-OCH3	7-11	8.11	
XXII.52	2-SCH2CH2C(CH3)CF2	S-H	6 CONFICHS	7-H	8-H	
XXII.53	2-SCH2CH2C(CH3)CF2	5-11	6-SO2NIICH3	7-H	8-11	
XXII.54	2-SCI12C112C(CH3)CF2	5-11	6-SO2C3115	7-11	8-11	
XXII.55	2-SCH2CH2C(CH3)CF2	5-11	6-CSNH2	7-11	H-8	
XXII.56	2-SCH2CH2C(CH3)CF2	5-11	6-NO2	7-14	8-11	
XXII.57	2-SCII2C112C(CII3)CF2	5·H	11-9	7-11	8-NO2	

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									,						
8-11	8-11	11-8	8-11	8-11	8-11	H-8	8-11	8-Br	<b>8</b> -E	8-11	H-8	8-11	8-11	XXIII.	
12-0-	7-SO2F	11-2	7-OCH3	7-11	7-SO2CH3	7-NIICOC6115	7-11	7-H	11-2	7-11	7-11	7-H	7-11	tion are set out in Table	TABLE XXIII
-0-C112-0-	11-9	Н-9	6-0CH3	6-CCII	11-9	11-9	11-9	H-9	6-SCF3	6-SOCF3	6-COCI13	6-SCH2CH2CH3	1-9	ding to the present inven	TABLE
5-11	S-H	5-OCI13	S-H	5-11	5-11	5-11	4-Cl	11-5	5-11	5-11	5-11	5-11	5-11	XIII) accord	
2-SC112C112C(C113)C1 <sup>2</sup>	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH12C(CH3)CF2	2-SCI12C112C(CH3)CF2	2-SC112C112C(C113)C1 <sup>2</sup>	2-SCH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SC112C112C(C113)CF2	Examples of compounds of Formula (XXIII) according to the present invention are set out in Table XXIII.	•
XXII.58	92.IIXX	XXII.60	XXII.61	XXII.62	XXII.63	XXII.64	XXII.65	XXII.66	XXII.67	XXII.68	XXII.69	XXII.70	XXII.71	Examples	• .

Š	R2	RS	R6	R7	88
XXIII.I	2-SCH2CH2C(CH3)CF2	5-11	11-9	7-11	8-11
XXIII.2		5-11	6-F	7-11	<b>=</b> -&
XXIII.3	2-SCH2CH2C(CH3)CF2	5-11	11.9	7-NO2	8-11
† IIIXX	2-SCH2CH2C(CH3)CF2	5-11	11-9	7-NH2	8-11

8-F	8-H	8-H	8-11	8-CH3	8-C112C11=C112	8-cC3H5	8-CI	8-11	Н-8	8-11	8-11	8-11	8-NHCOCII3	8-OCH3	11.8	8-11	8-C02CH3	Н-8	8-11	%-CN
7-11	7-11	7-C02C113	7-Н	Н-/	7-11	1-H	7-11	7-11	7-H	7-11	7-CH3	7-F	7-0CH3	7-0CH3	7-OCH3					
6-F	11-9	11-9	Н-9	Н-9	11-9	11-9	Н-9	6-CH2CH=CH2	6-cC3H5	6-С6Н5	6-СН3	P-CI	Н-9	Н-9	6-осн3	6-F	. 11-9	. 11-9	6-CH3	H-9
5-H	5-11	5-H	5-H	S-H	5-11	S-H	5-H	S-H	5-H	S-II	S-H	S-H	5-11	5-Н	5-11	S-H	S-H			
2-SCH2CH2C(CH3)CF2	-SOCII2CII2C(CII3)CF2	-SCH2CH2C(CH3)CF2	-SO2CH2CH2(CH3)CF2	-SCH2CH2C(CH3)CF2	-SCI12CI12C(CI13)CF2	-SCII2CII2C(CH3)CF2	-SCII2CII2C(CII3)CF2	-SCII2CH2C(CII3)CF2	-SCII2CII2C(CII3)CF2	-SCH2CH2C(CH3)CF2	-SCH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	-SCII2CII2C(CII3)CF2	-SCH2CH2C(CH3)CF2	SCH2CH2C(CH3)CF2	SCII2CII2C(CII3)CF2	2-SCII2CII2C(CH3)CF2	2-SO2C112C112C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCI12C112C(C113)CF2
XXIII.5 2-	XXIII.6 2-	XXIII.7 2-	XXIII.8 2-	XXIII.9 2-	XXIII.10 2-	XXIII.11 2-	XXIII.12 2-	XXIII.13 2-	XXIII.14 2.	XXIII.15 2-	XXIII.16 2	XXIII.17 2.	XXIII.18 2	XXIII.19 2	XXIII.20 2	XXIII.21 2	XXIII.22 2	XXIII.23 2	XXIII.24 2	XXIII.25 2

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	==-&	Н-8	11-8	8-11	11-8	. Н-8	H-8	8-H	8-11	8-11	8-Н	8-11	₽-8	8-11	8-11	8-11	8-11	8-11	8-11	8-11	FI-8	
	-CII=CII-CII=CII·	7-Cl 8	7-1:	-	7-NHCOCH3	2CH3)2	7-011	7-0C0CII3	7-0CH3	7-0S02CH3	7-11	7-11	7-11	7-11	7-11	7-H	7-11	7-11	7-COOH	7-NIICIIO	7-11	
	HD=HD-	11-9	6-11	11-9	Н-9	11-9	11-9	6-11	11-9	H-9	6-SO2C2H5	6-SO2N(C2115)2	11-9	Н-9	Н-9	11-9	11-9	11-9	-11-9	Н-9	6-CI	
- 17 -	5-11	S-H	5-11	5-11	5-11	5-11	5-11	5-11	S-11	5-11	5-H	S-H	5-11	5-CH3	5-N112	5-NO2	5-011	5-0CH2CH2F	5-11	5-H	S-H	
	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2. SCH2CH2C(CH3)CF2	2-SCI12C112C(C113)CF2	2-SCI12C112C(C113)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12C112C(C113)CF2	2-SC112C112C(C113)CF2	2-SC112C112C(C113)C1:2	2-SCH2CH2C(CH3)CF2	
	XXIII.26			XXIII 29		XXIII.31	XXIII.32	XXIII.33	XXIII.34		XXIII.36	XXIII.37	XXIII.38	XXIII.39	XXIII.40	XXIII.41	XXIII.42	XXIII.43	XXIII.44	SE'IIIXX	XXIII.46	

11-8	8-11	8-11	11-8	11-8	8-11	H-8	8-11	11-8	12 8-11	11-8	8-11	8-11	8-11	115 8-11	<b>∷</b> 8	11-8	115 8-11	8-11	8-NO2	COM
7-11	7-11	7-11	7-11	7-11	7-11	7-11	7-11	7-11	7-0CH2CCI=CH2	7-11	7-11	7-CN	7-CONFI2	7-CON(CII3)C2115	7-OCH2CH2F	7-0C112C112C113	7-OCH(CII3)C2II5	7-11	7-H	7.11
e-CN	11002-9	11-9	11-9	11-9	11-9	11-9	Н-9	6-NI12	. 11-9	6-OCH2CII=CCI2	6-OCH2CO2C2H5	6-11	H-9	11-9	11-9	Н-9	11-9	6-SCI13	11-9	V NO3
S-H	5-11	5-COOII	5-NIICOC2IIS	5-NIISO2CII3	5-0C0C2115	5-OCH2CH2CHCF2	5-OCH3	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11	5-11	11-5
2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-SCH2CH2C(CH3)CF2	2-SC112C112C(C113)CF2	2-SCI12CI12C(CI13)CF2	2-SCII2C3I2C(CII3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12C112C(C113)CF2	2-SC112C112C(C113)CF2	2-SCH2CH2C(CH3)CF2	2-SCI12CI12C(CI13)CF2	2-SC112C112C(C113)CF2	2-SCI12C112C(C113)CF2	2-SCI12CH2C(CH3)CF2	2.SCHOUNCHINGES
XXIII.47	XXIII.48	XXIII.49	XXIII.50	XXIII.51	XXIII.52	XXIII.53	XXIII.54	XXIII.55	XXIII.56	XXIII.57	XX111.58	XXIII.59	09.III.XX	XXIII.61	XXIII.62	XXIII.63	XXIII.64	XXIII.65	XXIII.66	79 HIXX

H-8	H-8	H-8	H-8
7-11	7-H	HCF2 7-H	7-H
6-CF3	6-NO2	6-C02C112CH2C11CF2 7-H	Н-9
5-11	S-H	5-11	5-NIICOCF3
2-SCH2CH2C(CH3)CF7	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2	2-SCH2CH2C(CH3)CF2
XX111.68	69.111.XX	XXIII.70	XXIII.71

Examples of compounds of Formula (XXIV) according to the present invention are set out in Table XXIV.

# TABLE XXIV

R2	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-S(O)CII;CII;C(CII;)=CIF;	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCH,CH,C(CH,)=CF,	2-H	2-SCH,CII,C(CII,)=CF,	2-SCH,CH,C(CH,)=CF,	2-S(O),CH,CH,C(CH,)=CF,	2-SCH,CII,C(CH,)=CF,	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>1</sub> )=CF <sub>2</sub>	2-SCH,CH,C(CII,)=CF,	2-SCH2CH2C(CH3)=CF3	2-11	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>1</sub> )=CF <sub>2</sub>
R6	11-9	Н-9	6-ОСН,	Н-9	Н-9	Н-9	6- <u>n</u> -C <sub>1</sub> H,	Н-9	11-9	Н-9	6-n-C,11,	11-9	6-OCH,CF,	6-OCHECH
RS	5-11	5-11	5-11	5-11	()=CF <sub>2</sub> 5-H	5-CH <sub>3</sub>	S-H	S-H	5-H		5-11	2-11	C(CII,)=CI; 5-11	11-5
R4	=-	4-11	4-CF <sub>1</sub>	4-C <sub>6</sub> H <sub>5</sub>	4-SCII,CH,C(CH,)=CF,	4-0C:11,	4-OCII)	4-0C <sub>5</sub> H <sub>11</sub>	4-0C <sub>4</sub> H <sub>9</sub>	4-OCH, CH=CHCH,	4-0II	4-CF,	E	4-CII <sub>t</sub>
COMPOUND R4	XXIV.I	XXIV.2	XXIV.3	XXIV.4	XXIV.5	9.VIXX	XXIV.7	XXIV.8	6.VIXX	XXIV.10	XXIV.11	XXIV 12	XXIV.13	XXIV.14

XXIV.15	1)-t	5-11	6-n-C <sub>1</sub> H,	2-SCH2CH2C(CH3)=CF3
XXIV.16	4-0CH,C,H,	5-11	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
XXIV.I7	4-0CH2CO2CH1	5-11	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
XXIV.18	4-n-C,11,	5-11	11-9	2-SCII,CH,C(CH,)=CF,
61.VIXX	4-OCII;(4-CI-C <sub>1</sub> II <sub>1</sub> )	2-11	Н-9	2-SCH2CH2C(CH3)=CF2
XXIV.20		5-H	Н-9	2-SCH2CH4C(CH4)=CF3
XXIV.21	4-OCII,CF,	5-H	6-CH(CII,)	2-SCH2CH2C(CH3)=CF2
XXIV.22		S-H	6-CH(CH <sub>i</sub> ) <sub>2</sub>	2-SCII,CII,C(CII,)=CF2
XXIV.23	4-0(CII <sub>2</sub> ) <sub>2</sub> CO <sub>2</sub> CII,	5-11	Н-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>4</sub> )=CF <sub>2</sub>
XXIV.24	4-0CII,	5-11	6-CH(CH <sub>3</sub> )2	2-SCH2CH2C(CH3)=CF2
XXIV.25	4-CH(CH <sub>1</sub> );	S-H ·	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
XXIV.26	4-SCH,CH,C(CH,)=CF,	S-II	6-CH <sub>3</sub>	2-C,Hs
XXIV.27	4-SCII,CII,C(CII,)=CF2	5-11	H-9	2-CH <sub>3</sub>
XXIV.28	4-0CII,	(CII <sub>2</sub> ) <sub>1</sub>		2-SCH2CH2C(CH3)=CF3
XXIV.29	4-CII,	S-H	11-9	2-SCII <sub>2</sub> CII <sub>2</sub> C(CH <sub>1</sub> )=CF <sub>2</sub>
XXIV.30	4-CII,	5-H	Н-9	$2-S(O)CH_2CH_2C(CII_3)=CF_2$
XXIV.31	4-II	5-C(CH <sub>3</sub> ),	Н-9	2-SCH,CH,C(CH,)=CF,
XXIV.32	4-11	5-CF <sub>3</sub>	Н-9	$2-SCH_2CH_3C(CH_3)=CF_2$
XXIV.33	4-11	5-CH(CH <sub>1</sub> ) <sub>2</sub>	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
XXIV.34	11-7	S-CI	Н-9	$2-SCH_2CH_2C(CH_3)=CF_2$
XXIV.35	1-1	5-C <sub>6</sub> H <sub>5</sub>	11-9	2-SCH,CII,C(CH,)=CF,
XXIV.36	4-SCH,CH,CH=CF;	S-H	Н-9	2-SCH,CH,C(CH,)=CF,
XXIV.37	4-OCHICHICHECHI	5-11	11-9	2-SCH2CH2C(CH1)=CF2
XXIV.38	H-+	(CH <sub>2</sub> ),		2-SCII,CII,C(CII,)=CF,
XXIV.39	4-('II'	5-CII,	6-CII <sub>3</sub>	2-SCII,CII,C(CII,)=CF;

	•	2-SCH2CH2C(CH3)=CF2	2-SCII,CH,C(CH,)=CF2	2-SCII,CII,C(CH,)=CF2	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCH3CH2C(CH3)=CF2	2-SCH2CH2C(CH3)=CF2	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCH2CH2C(CH3)=CF2	2-SCII,CII,C(CH,)=CF,	2-SCII2CH2C(CII3)=CF2	$2-SCH_2CH_2C(CH_3)=CF_2$	2-11	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCII <sub>2</sub> CII <sub>3</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCH <sub>2</sub> CII <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SCII,CH,C(CII,)=CF2	2-S(O)CH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-S(O)2CH2CH2(CH3)=CF2	2-SCII,CII,C(CII,)=CF,	2-SCII,CII,C(CII,)=CF,	$2-SCH_1CH_2C(CH_3)=CF_2$			2-\$CH <sub>2</sub> CH <sub>2</sub> C(CH <sub>1</sub> )=CF <sub>2</sub>
	6-SCH,CH,C(CH,)=CF;	11-9	11-9	6-11	11-9	н-9	Н-9	Н-9	11-9	6-CI	Н-9	6-CI	6-OCH, CH, CH=CF,	Н-9	6-F	11-9	H-9	CII==CII	CH==CIICII==CII	CII==CHCII==CII	CII==CHCII==CII	H-9	H-9	: :	11-9	11-9
- 18 -	S-CII,	5-11	5-11	5-11	5-11	5-Н	5-11	5-11	5-11	5-11	2-11	5-11	5-11	5-II	· II-5	5-11	5-H	CII==CIICII==CII	CH==CII	CII==CH	CH==CH	5-H	11 5	11-0	9-11	S-NII,
	4-SCH,CH,CH=CF	4-('≡('	N.J.	4.(4-15-C.11a)	4-(3-F-C,II <sub>2</sub> )	4-(4-CF,-C,II,CII,)	4-'C.III	4-(1-CII <sub>1</sub> -'C <sub>1</sub> II <sub>5</sub> )	4-C11,CF,	4-0CH,CF;	4-CII;OCII;		4-SCH,CH,C(CH)=CF,	<u> </u>	4-SCII	4-C(CH)	4-C(CH5)	- T	4-11	: =	1.OII	1.CE.CE.		4-CH(OCH))	4-CI	4-NII;
	0F AIXX	XXIV 41	CF AIX X	ET ALXX	ST AIXX	XXIV 45	XXIV 46	25 VIXX	8F	6F AIXX	05 VIXX	15 VIXX	72 VIXX	XXIV 53	FS AIXX	XXIV 55	XXIV 56	XXIV.57	XX VIX X	05 717.7	(%) XIXX	19 2122	10. 71.	7.9.VIX.N	XXIV.63	XXIV.64

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4-OCH <sub>2</sub> CF <sub>3</sub>	5-11	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-OCII,CF,	5-11	11-9	2-S(O)CH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-OCH;CH=CH;	5-11	11-9	2-SCH,CH,C(CH,)=CF,
4-OCH,CH,CH=CF2	5-11	6-CF <sub>3</sub>	2-SCH <sub>2</sub> CH <sub>3</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-0C;II,	5-11	11.9	2-SCH,CH,C(CH3)=CF3
4-011	. II-S	11-9	2-SCH,CH,C(CH,)=CF,
4-OII	5-CII,	11-9	2-SCH,CH,C(CH,)=CF;
4-OII	5-11	6-CF,	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-0CH(CH <sub>1</sub> ),	S-II	H-9	$2-SCH_1CH_1C(CH_3)=CF_2$
4-OC,11,	5-11	11-9	2-SCII,CII,C(CII,)=CF,
4-C <sub>6</sub> H <sub>5</sub>	5-11	6-0C <sub>2</sub> 11 <sub>5</sub>	2-SCH,CH,C(CH,)=CF,
4-(3-CF <sub>1</sub> -C <sub>6</sub> H <sub>1</sub> )	S-II	H-9	2-SCII,CII,C(CII,)=CF;
4-(4-NO2-C <sub>6</sub> II <sub>4</sub> )	5-11	H-9	2-SCH,CII,C(CII,)=CF;
4-SCHECHEC(CH1)=CF2	5-11	6-SCH,	2-11
4-C11=CF2	S-H	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-CIIO	S-H	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-CONII,	S-II	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-C00H	5-11	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4-C00CII,	5-11	6-H	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>1</sub> )=CF <sub>2</sub>
=-	5-NO <sub>2</sub>	11-9	2-SCH,CH,C(CH,)=CF,
=-	5-SCH2CH2C(CH1)=CF2	H-9	2-11
4-CII,	5-C112C,115	11-9	2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>
4.CII,	5-COC,H <sub>s</sub>	11-9	2-SCH2CH2C(CH3)=CF2
4-0CH;CCI=CH;	5-11	11-9	2-SCH,CH,C(CH,)=CF,
4-0C11,C11=CC1,	5-11	11-9	2-SCH,CH,C(CH,)=CF,

-

.

2-SCH <sub>2</sub> CH <sub>2</sub> C(CH <sub>3</sub> )=CF <sub>2</sub>	2-SO <sub>2</sub> CH <sub>2</sub> CHC(CH <sub>3</sub> )CF <sub>2</sub>	
11-9	11-9	
5-C02C2115	5-11	
4-C <sub>6</sub> H <sub>s</sub>	1-11	
06.VIXX	16.VIXX	

#### c indicates a cyclic substituent

The compounds of formula (I) wherein n is 0 may be prepared by a variety of methods.

Compounds of Formula (I) may be prepared by dehydrobromination of the corresponding compound of Formula (XXV):

for example by treatment of the compound of Formula (XXV) with a base such as an alkali metal hydroxide, for example potassium or sodium hydroxide, in the presence of an inert solvent, for example dimethylformamide. Compounds of Formula (XXV) may be prepared from the corresponding thiol compound of Formula (XXVI):

by reaction of the compound of Formula (XXVI) with a compound of Formula (XXVII):

wherein L is a readily displaceable leaving group such as iodo, bromo, methanesulphonyloxy and especially para-toluenesulphonyloxy, under conditions well known in the art for such displacement reactions, for example in the presence of a mild base such as an alkali metal carbonate, for example potassium or sodium carbonate, in an inert solvent, at a temperature in the range from 0 °C to 200 °C, preferably 40 °C to 100 °C, and most conveniently at the reflux temperature of a suitable inert solvent such as acetone which has a boiling point within this range.

Compounds of Formula (XXVII) may be prepared by the following sequence of reactions. Crotonic acid (CH<sub>2</sub>CH=CHCO<sub>2</sub>H, commercially available) is reacted with dibromodifluoromethane (CF<sub>2</sub>Br<sub>2</sub>) under the conditions described by Rong and Keese in Tetrahedon Letters. 1990, page 5616, in the presence of acetonitrile, water, sodium dithionite (Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub>) and sodium bicarbonate, to give the compound of Formula (XXVIII):

The compound of Formula (XXIX):

$$Br = CH_3$$

$$CH = CH_2 - CH_2 - OH$$
( XXIX)

is then prepared by reduction of the compound of Formula (XXVIII) under conditions well known in the art for the reduction of an acid group to a primary alcohol, for example using lithium aluminium hydride in the presence of an inert solvent such as tetrahydrofuran. Compounds of Formula (XXVII) may then be prepared from the compound of Formula (XXIX) by standard methods for the conversion of a primary hydroxyl group to a displaceable leaving group. In the case of compounds of Formula (XXVII) where L is methanesulphonyloxy or paratoluenesulphonyloxy, the compound of Formula (XXIX) may be reacted with methanesulphonyl chloride or para-toluenesulphonyl chloride. In the case of the compound of Formula (XXVII) where L is iodo or bromo, the compound of Formula (XXIX) may be reacted with an alkali metal iodide or bromide, for example sodium or potassium iodide or bromide, under acidic conditions.

It will be appreciated by those skilled in the art that compounds of Formula (XXVI) may exist in tautomeric equilibrium between the equivalent mercapto and thione forms. For the sake of convenience, these compounds are referred to herein in their mercapto form unless otherwise stated.

Compounds of Formula (XXVI) are commercially available or may be prepared from commercially available precursors by standard procedures well known in the art. For example, typical procedures suitable for the preparation of many of the relevant compounds of Formula (XXVI) where R is (XXII) or (XXIII) and their precursors may be found in the following standard references: Comprehensive Heterocyclic Chemistry (Publishes by Pergamon. Edited by Katritzky and Rees), 1984, e.g. pages 177-331; Journal of Organic Chemistry, 19, 758-766 (1954); Heterocyclic Compounds (Published by Wiley, Edited by Elderfield), Volume 5; Organic Compounds of Sulphur, Selenium and Tellurium (Published by The Chemical Society, Specialist Reports). Volumes 3, 4 and 5; Warburton et al, Chemical Reviews, 57, 1011-1020 (1957). By

way of example, many of the compounds of formula (XXVI), where R is (XXIII) may be prepared by reacting a correspondingly substituted 2-aminophenol or a salt thereof, with thiophosgene, in an inert solvent such as diethyl ether or chloroform, and optionally in the presence of a base, such as potassium carbonate, and/or water. Also by way of example, many of the compounds of formula (XXVI) where R is (XXII) may be prepared by the Herz Reaction (Warburton et al, Chemical Reviews, 57, 1011-1020 (1957)) in which appropriately substituted anilines are reacted sequentially with disulphur dichloride and aqueous sodium hydroxide to product the corresponding 2-mercapto aniline derivative, which is then reacted with carbon disulphide to produce the 2-mercaptobenzthiazole of formula (XXVI). Benzthiazoles of formula (XXVI) may also be prepared from appropriately substituted N-phenylthioureas by oxidation (for example in the presence of molecular bromine) and replacement of the amino group of the resulting 2-aminobenzthiazole with a 2-mercapto group by reaction with a base and carbon disulphide or by diazotisation, reaction with a halide and displacement of the 2-halo group using NaSH. N-phenylthioureas are available by reaction of the corresponding anilines with ammonium thiocyanate. Compounds of Formula (XXVI) may also be prepared by reaction of the correspondingly substituted 2-halonitrobenzene by reaction with sodium sulphide, sulphur (S<sub>8</sub>), and carbon disulphide, or by reaction of the correspondingly substituted phenyl isothiocyanate with sulphur (S<sub>8</sub>) to produce the corresponding 2-keto benzthiazole which may be readily converted to the corresponding 2-mercaptobenzthiazole of Formula (XXVI). All of these reactions are well documented in the chemical literature. The choice of the appropriate procedure will depend upon the particular nuclear substitution pattern required and is within the normal skill of the art. Typical examples are provided in the experimental examples.

Alternatively, the compounds of formula (I) may be prepared by reacting a corresponding compound of formula (XXX):

where L is again a good leaving group, with a mercapto compound of formula (XXXI):

$$B_{r} - C - CH - CH_{2} - CH_{2} - SH$$
 (XXXI)

under conditions well known in the art for such displacement reactions, with subsequent dehydrobromination. Preferably, L is halogen or a nitro group. Conveniently the reaction may be

carried out using a two phase solvent system, such as water/dichloromethane, in the presence of a phase transfer catalyst, for example tetra-n-butyl ammonium bromide, at ambient temperature under a nitrogen atmosphere.

The mercapto compound of formula (XXXI) is conveniently reacted in the form of its S-acetyl or its isothiouronium hydrogen bromide salt, which compounds are readily hydrolysed to the mercapto compound of formula (XXXI).

The compounds of formula (I) where n is 1 or 2, may be prepared by oxidising the correspondingly substituted compound of formula (I) when n is 0, using conventional methods, for example by treatment with a suitable oxidising agent in an inert organic solvent. In general, oxidation of a compound of Formula (I) with one equivalent of a suitable oxidising agent provides the corresponding compound wherein n is 1, and oxidation using two equivalents of the oxidising agent provides the corresponding compound wherein n is 2. Suitable oxididising agents include organic and inorganic peroxides such as peroxy carboxylic acids, or their salts, for example, meta-chloroperbenzoic acid, perbenzoic acid, magnesium monoperoxy-phthalic acid or potassium peroxymono-sulfate.

Thus, according to a further aspect of the present invention there is provided a process for the preparation of compounds of formula (I) where n is 1 or 2, which comprises oxidation of the correspondingly substituted compound of formula (I) when n is 0.

As well as the compounds of formula (I) being prepared from the corresponding substituted compounds, it will be appreciated that subsequent functional group transformations may be carried out using known chemistry to obtain the required ring substitution. Examples of such functional group transformations include the reduction of nitro groups to amine groups, halogenation, e.g. chlorination, hydrolysis of an ester to the acid, oxidation of an alcohol to the acid, salt formation.

Various further preferred features and embodiments of the present invention will now be described in futher detail with reference to the following illustrative examples in which percentages are by weight and the following abbreviations are used: mp = melting point; bp = boiling point; g = grammes; gc = gas chromatography; NMR = nuclear magnetic resonance; s = singlet; d = doublet; dd = double doublet; dd = do

otherwise stated.  $M^*$  = molecular ion as determined by mass spectrometry; FAB = fast atom bombardment; tlc = thin layer chromatography.

#### Preparation 1

This describes the three-stage preparation of 4-bromo-4,4-difluoro-3-methylbutyl 2-methylbenzenesulphonate.

# Step (a) - Preparation of 4-bromo-4,4-difluoro-3-methylbutanoic acid.

Two identical reactions were set up as follows. To a solution of 2-butenoic acid (3.44g) in acetonitrile (160cm³) was added sodium dithionite (8.36g), sodium bicarbonate (4.15g), water (40cm³), and finally dibromodifluoromethane (10cm³). The reaction mixture, which consisted of a biphasic solution containing solid inorganic salts, was stirred at room temperature for 4 hours after which the solid had dissolved and gc analysis indicated complete reaction. The combined reaction mixture from the two reactions was saturated with solid sodium chloride and the two phases separated. The organic phase was dried over MgSO<sub>4</sub>, filtered and evaporated under reduced pressure to give a pale yellow oil. This oil was taken up in ethyl acetate and filtered through silica to remove inorganic salts, leaving a bright yellow solution which was dried with MgSO<sub>4</sub> and evaporated as before to give 4-bromo-4,4-difluoro-3-methylbutanoic acid as a yellow oil (13.12g). <sup>1</sup>H NMR (CDCl<sub>3</sub>) δ (ppm): 2.70-2.90(2H,m); 2.37(1H,brq); 1.23(3H,d).

# Step (b) - Preparation of 4-bromo-4,4-difluoro-3-methylbutanol

To a stirred solution of 4-bromo-4,4-difluoro-3-methylbutanoic acid (6g) in dry tetrahydrofuran (120cm³) at 0 °C under nitrogen was added portionwise solid lithium aluminium hydride (1.156g), causing effervescence. The solution was stirred at 0 °C for 1 hour and then allowed to warm to the ambient temperature, with stirring, over one hour. The reaction was quenched by the addition of water (1.2cm³), 15% weight/volume aqueous sodium hydroxide (1.2cm³) and water (3.6cm³), which left a white precipitate and a clear organic phase. The reaction mixture was filtered through Celite (Trade Mark) which was washed copiously with ethyl acetate and the filtrate was evaporated under reduced pressure to give 4-bromo-4,4-difluoro-3-methylbutanol as a pale yellow oil (4.255g). <sup>1</sup>H NMR (CDCl<sub>3</sub>)  $\delta$  (ppm): 3.65-390(2H,t); 2.40(1H,m); 2.00(1H,m); 1.80(1H,m); 1.50(1H,m); 1.15(3H,d).

# Step (c) - Preparation of 4-bromo-4,4-difluoro-3-methylbutylsulphonate

To a stirred solution of 4-bromo-4.4-difluoro-3-methylbutanol (2.63g) and tosyl chloride (p-toluenesulphonyl chloride, 2.58g) in dichloromethane (25cm<sup>3</sup>) at the ambient temperature was added triethylamine (3.85cm<sup>3</sup>) and dimethylaminopyridine (0.330g). The reaction was stirred for

45 minutes, during which time a white precipitate formed, and after which gc indicated complete consumption of tosyl chloride. The reaction mixture was partitioned between ethyl acetate and 2M HCl and the layers separated. The aqueous layer was extracted twice with ethyl acetate and the combined organic phases were washed with 2M HCl, water, brine and dried over MgSO<sub>4</sub>. Filtration and evaporation under reduced pressure gave 4-bromo-4,4-difluoro-3-methylbutyl ptolysulphonate as a pale yellow oil (4.34g). <sup>1</sup>H NMR (CDCl<sub>3</sub>)  $\delta$  (ppm): 7.80(2H,d); 7.37(2H,d); 4.05-4.20 (2H,m); 2.45(3H,s); 2.00-2.40(2H,m); 1.60(1H,m); 1.08(3H,d).

# Example 1: Preparation of 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-chlorobenzothiazole. (Compound XXII.28)

To a solution of 4-bromo-4,4-difluoro-3-methylbutyl p-methylbenzenesulfonate (0.5g) in acetone (7ml) was added 2-mercapto-5-chlorobenzothiazole (0.296g)and potassium carbonate(0.39g), which resulted in formation of a beige suspension. The reaction was heated at reflux for 1 hour after which gc analysis indicated complete consumption of staring material to give a single peak. The reaction was cooled and poured in to ethyl acetate and water. The layers were separarted and the aqueous layer was extracted into ethyl acetate (2x). The combined organic layers were washed with 2M HCl, water and brine. The organic layer was dried (MgSO<sub>4</sub>), filtered and evaporated under reduced pressure to give crude 2-(4-bromo-4,4-difluoro-3-methyl-butylthio)-5-chlorobenzothiazole as a brown oil (0.560g).

The above oil was then dissolved in dimethylformamide (5ml) and powdered potassium hydroxide (0.800g) was added resulting in a dark brown solution. The reaction was stirred at rt and gc analysis after 45 minutes indicated complete loss of starting material. The reaction mixture was poured into ethyl acetate and 2M HCl and the layers separated. The aqueous layer was extracted with ethyl acetate (2x). The combined organic layers were washed with 2M HCl, water and brine and dried (MgSO<sub>4</sub>). The organic layer was then filtered and evaporated under reduced pressure to give a brown oil. Purification by column chromatography on silica gel using 6% diethylether in hexane as eluent gave of 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-chlorobenzothiazole, (0.215g). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1.65 (3H,t); 2.50 (2H,m); 3.40 (2H,t); 7.30 (1H,dd); 7.65 (1H,d).

The following compounds were prepared using the general method described above:

- 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-trifluoromethylbenzothiazole (Compound XXII.27). <sup>1</sup>H nmr (CDCl<sub>3</sub>)  $\delta$  1. 70 (3H,t); 2.50 (2H,m); 3.45 (2H,t); 7.55 (1H,d); 7.90 (1H,d); 8.10 (1H,bs).
- (ii) 2-(4,4-difluoro-3-methyl-but-3-enylthio)benzothiazole (Compound XXII.1). <sup>1</sup>H nmr (CDCl<sub>2</sub>) δ 1. 70 (3H,t); 2.50 (2H,m); 3.40 (2H,t); 7.30 (1H,t); 7.40 (1H,t); 7.75 (1H,d); 7.85 (1H,d).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)-6-methoxybenzoxazole (Compound XXIII.34). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 70 (3H,t); 2.50 (2H,m); 3.35 (2H,t); 3.85(3H,s); 6.89 (1H,dd); 7.00 (1H,d); 7.50 (1H,d).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)-6-nitrobenzothiazole (Compound XXII.22). <sup>1</sup>H nmr (CDCl<sub>3</sub>)  $\delta$  1. 70 (3H,t); 2.55 (2H,m); 3.50 (2H,t); 3.85(3H,s); 7.90 (1H,d); 8.30 (1H,dd); 8.70 (1H,d).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)benzoxazole (Compound XXIII.1).  $^{1}H$  nmr (CDCl<sub>3</sub>)  $\delta$  1. 70 (3H.t); 2.50 (2H,m); 3.40 (2H,t); 7.20-7.35 (2H,m); 7.45 (1H,dd); 7.60 (1H,dd).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)pyrimidine (Compound XXIV.1). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 65 (3H,t); 2.40(2H,m); 3.20 (2H,t); 6.95 (1H, t); 8.50 (2H, d).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-methyl-1,3,4-oxadiazole (Compound XII.49). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 60 (3H,t); 2.45-2.50 (2H,m); 2.50 (3H,s); 3.30 (2H, t).
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-phenyloxazole (Compound VI.121).  $^{1}H$  nmr (CDCl<sub>3</sub>)  $\delta$  1. 60 (3H,t); 2.45-2.55 (2H,m); 3.40 (2H, t); 7.30 (1H,s); 7.30 (1H,t); 7.40 (2H,t); 7.60 (2H,d).
- $2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-phenyl-1,3,4-oxadiazole (Compound XII.3). \ ^1H \ nmr \\ (CDCl_1) \ \delta \ 1. \ 65 \ (3H,t); \ 2.50-2.60 \ (2H,m); \ 3.30-3.40 \ (2H,t); \ 7.95-8.05 \ (2H,m); \ 7.45-7.60 \ (3H,m). \\$
- 2-(4,4-difluoro-3-methyl-but-3-enylthio)thiazole (Compound VII.1).  $^1H$  nmr (CDCl<sub>3</sub>)  $\delta$  1. 65 (3H,t); 2.40-2.50 (2H,m); 3.30 (2H, t); 7.25 (1H,d); 7.70 (1H,m).

The following compounds were made according to the procedure outlined above but were not purified prior to oxidation in Examples (3.1, 3.11 and 3.1V (via Example 2);

2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-cyclopropyl-1,3,4-thiadiazole (Compound XIII.6). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 60 (3H.t);1.10-1.15 (2H.m); 1.15-1.25 (2H.m); 2.40-2.50 (2H.m); 2.30 (1H,m); .40 (2H. t).

2-(4,4-difluoro-3-methyl-but-3-enylthio) pyridine (Compound XVI.19). <sup>1</sup>H nmr (CDCl<sub>3</sub>)  $\delta$  1. 60 (3H,t); 2.35-2.40(2H,m); 3.25 (2H,t); 7.00 (1H,dt); 7.20 (1H, d); 7.50 (1H,dt); 8.40-8.45 (1H,m).

2-(4,4-difluoro-3-methyl-but-3-enylthio)imidazole (Compound VIII.1). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 65 (3H.t); 2.40-2.50 (2H,m); 3.30 (2H, t); 7.25 (1H,d); 7.70 (1H,m).

4-(4,4-difluoro-3-methyl-but-3-enylthio)pyridine (Compound XVI.5).  $^{1}H$  nmr (CDCl<sub>3</sub>)  $\delta$  1. 65 (3H.t); 2.40-2.50 (2H,m); 3.30 (2H, t); 7.25 (1H,d); 7.70 (1H,m).

Example 2 - Preparation of 2-(4,4-difluoro-3-methyl-but-3-enylthio)-1-propylimidazole. (Compound VIII.153

To a solution of 2-(4,4-difluoro-3-methyl-but-3-enylthio)imidazole(0.220g) in dimethylformamaide (5ml) was added sodium hydride (0.038g of an 80% suspension in oil) and the reaction was stirred at rt for 30 minutes. Propyl iodide (0.200g) was added and the reaction stirred at rt for 1 hour after which gc analysis indicated complete reaction. The reaction was poured into ethylacetate and water and the layers separated. The aqueous layer was extracted with ethyl acetate (2x). The combined organic fractions were washed alternately with water and brine (3x) and dried (MgSO<sub>4</sub>). Filtration and evaporation under reduced pressure gave a yellow oil.

This material was carried forward to the oxidation step (Example 3.IV) without purification

Example 3 - Preparation of 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)pyrimidine. (Compound XXIV.91)

To a stirred solution of 2-(4,4-difluoro-3-methyl-but-3-enylthio)pyrimidine (0.371g) in dichloromethane (15ml) at π was added, portionwise, *meta*-chloroperbenzoic acid (1.244g). The reaction mixture was stirred at room temperature for 2 hours and then left to stand at π overnight. The reaction mixture was poured into aqueous sodium bicarbonate and extracted with dichloromethane. The combined organic layers were then dried (MgSO<sub>4</sub>), filtered and evaporated under reduced pressure to give a yellow oil which crystallised on standing. The solid was triturated with hexane to give 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)pyrimidine, (compound XXIV.9) ) as a yellow solid (0.302g). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 60 (3H,t); 2.50-2.60 (2H,m); 3.60-3.70 (2H,t); 7.60 (1H,t); 9.00 (2H, d).

The following compounds were made using the method described above and using the appropriate unoxidised starting materials:

- (I) 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)pyridine (Compound XVI.20). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 55 (3H,t); 2.40-2.50(2H,m); 3.45-3.50 (2H,m); 7.60 (1H,dt); 7.80 (1H, dt); 8.10 (1H,d); 8.80 (1H,dd).
- (II) 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)-5-cyclopropyl-1,3,4-thiadiazole (Compound XIII.7). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 1. 60 (3H,t);1.25-1.30 (2H,m); 1.30-1.45 (2H,m); 2.45-2.50 (1H,m); 2.50-2.60 (2H,m); 3.60-3.65 (2H, t).
- (III) 4-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)pyridine (Compound XVI.6).  $^{1}$ H nmr (CDCl<sub>3</sub>)  $\delta$  1. 60 (3H,t); 2.45 (2H,m); 3.20 (2H,t); 7.80 (2H,m); 8.30 (2H, m).
- (IV) 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)-1-propylimidazole (Compound VIII.155). <sup>1</sup>H nmr (CDCl<sub>3</sub>) δ 0.95 (3H,t); 1.60 (3H,t); 1.90 (2H,m); 2.50 (2H,m); 3.60 (2H,m); 4.30 (2H,dd); 7.05 (1H,s); 7.20 (1H, s)..

Example 4 - Preparation of 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-chlorothiazole. (Compound VII.24).

To a solution of 2-(4,4-difluoro-3-methyl-but-3-enylthio)thiazole (0.8g) in carbon tetrachloride (25ml) was added N-chlorosuccinimide (0.575g) and the reaction was heated to reflux for 3 hours and then allowed to cool. The reaction was filtered and the residue washed with carbon tetrachloride. The filtrate was evaporated under reduced pressure to give a yellow oil. Purification by column chromatography on silica gel using 5% diethylether in hexane gave 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-chlorothiazole, compound VII.24, as an oil (0.35g).  $^1$ H nmr (CDCl<sub>3</sub>)  $\delta$  1. 65 (3H,t); 2.40 (2H,m); 3.25 (2H, t); 7.43(1H,s).

Example 5 - Preparation of gave 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)-5-chlorothiazole (Compound VII.26).

To a solution of 2-(4,4-difluoro-3-methyl-but-3-enylthio)-5-chlorothiazole (0.128g) in methanol (5ml), cooled in a methanol ice bath, was added magnesium monoperoxyphthalate (MMPP) (0.556g). After stirring for 1.5 hours tlc analysis indicated no starting material present, but some sulfoxide still remaining. A further 0.1g of MMPP was added and the reaction stirred for a further 1 hour after

which tic analysis indicated complete reaction. The reaction was flooded with diethylether and the white ppt filtered off and washed with diethylether. The diethylether filtrate was then washed with water and brine and dried (MgSO<sub>4</sub>). Filtration and evaporation under reduced pressure gave a soild which was repeatedly washed with chloroform. The chloroform washings were evaporated under reduced pressure to give an oil. Purification by column chromatography on silica gel using a gradient of 10% by 15% diethylether in hexane gave 2-(4,4-difluoro-3-methyl-but-3-enylsulfonyl)-5-chlorothiazole, compound VII.26, as an oil (0.04g). <sup>1</sup>H nmr (CDCl<sub>3</sub>) d 1. 60 (3H,t); 2.50-2.55 (2H,m); 3.40-3.50 (2H, m); 7.85 (1H,s).

The compounds of formula (I) are nematicidal and can be used to control nematodes in plants. Thus, in a further aspect of the present invention, there is provided a method of killing or controlling nematodes, which comprises applying a compound of formula (I) to the nematode.

The term "controlling" extends to non-lethal effects which result in the prevention of damage to the host plant and the limitation of nematode population increase. The effects may be the result of chemical induced disorientation, immobilisation, or hatch prevention or induction. The chemical treatment may also have deleterious effects on nematode development or reproduction.

The compounds of the present invention can be used against both plant parasitic nematodes and nematodes living freely in the soil.

Examples of plant-parasitic nematodes are: ectoparasites, for example, Xiphinema spp., Longidorus spp., and Trichodorus spp.; semi-parasites, for example, Tylenchulus spp.; migratory endoparasites, for example, Pratylenchus spp., Radopholus spp. and Scutellonema spp.; sedentary parasites, for example, Heterodera spp., Globodera spp. and Meloidogyne spp.; and stem and leaf endoparasites, for example, Ditylenchus spp., Aphelenchoides spp. and Hirshmaniella spp.

The compounds of formula (I) also display activity against different types of nematodes including cyst nematode.

The compounds of the present invention also exhibit activity against other pests of growing and stored agronomic crops, forestry, greenhouse crops, ornamentals, nursery crops, stored food and fibre products. These pests include:

Heteroptera/Homoptera including Myzus persicae, Aphis gossypii, Aphis fabae, Rhopalosiphum padi, Aonidiella spp., Trialeurodes spp., Bemisia tabaci, Nilaparvata lugens, Nephotettix cincticeps, Nezara viridula, Dysdercus suturellus, Dysdercus fasciatus, and Lygus lineoralis.

Diptera including <u>Ceratitis capitata</u>, <u>Tipula</u> spp., <u>Oscinella frit</u>, <u>Liriomyza</u> spp., <u>Delia</u> spp., and <u>Peromya</u> spp.

Lepidoptera including <u>Pieris brassicae</u>, <u>Plutella xylostella</u>, <u>Spodoptera littoralis</u> and other Spodoptera spp., <u>Heliothis virescens</u> and other Heliothis and Helicoverpa spp., and <u>Chilo partellus</u>.

Coleoptera including <u>Phaedon cochleariae</u>, <u>Diabrotica</u> spp., <u>Agrotis</u> spp., and <u>Leptinotarsa</u> decemlineata.

Blattodea including Blattella germanica, Periplaneta americana, and Blatta orientalis. Orthoptera including Chortiocetes terminifera, Schistocerca spp., Locusta spp. and Scapteriscus spp..

Acarı including Panonychus ulmi, Panoychus citri, Tetranychus urticae, Tetranychus cinnabarinus, Phyllocoptruta oleivora, and Brevipalpus spp.

The compounds can also be used against livestock, household, public and animal health pests such as:

Siphonaptera including <u>Ctenocephalides felis</u>, <u>Ctenocephalides canis</u>, <u>Xenopsylla cheopis</u>, and <u>Pulex irritans</u>.

Mallophaga including Menopon gallinae, and Cuclotogaster heterographus.

Anoplura including <u>Pediculus humanus</u> capitis, <u>Pediculus humanus</u> humanus, and <u>Phthirus pubis</u>. Diptera including <u>Musca domestica</u>, <u>Aedes aegypti</u>, <u>Anopheles gambiae</u>, <u>Culex quinquefasciatus</u>, <u>Chrysops discalis</u>, and <u>Tabanus nigrovittatus</u>.

Sarcophagidae including <u>Sarcophaga haemorrhoidalis</u> and <u>Wohlfahrtia magnifica</u>.

Calliphoridae including <u>Lucilia cuprina</u> and <u>Cordylobia anthropophaga</u>.

Oestridae including <u>Oestrus ovis</u>.

Generally, the compounds may be used to combat and control pests injurious to and/or associated with the transmission of diseases of man and animals. The pests which may be combated and controlled by the use of the compounds of the invention parasitic nematodes of animals, including mammals, which may be found in the gastrointestinal tract, the air passages or blood vessels of the respiratory tract and the heart, together with the associated blood vessels.

The compounds of formula (I) may be used to treat vertebrates, such as mammals (for example, man, pigs, sheep, cattle, equines, cats and dogs), birds (for example, chicken, ducks, turkeys, geese, canaries and budgerigars), and fish (for example, salmon, trout and ornamental fish).

The nematode and other pests may be killed/controlled by applying an effective amount of one or more of the compounds of the present invention to the environment of the pests, to the area to be protected, as well as directly on the pests.

In order to apply the compound to the locus of the nematode, insect or acarid pest, or to a plant susceptible to attack by the nematode, insect or acarid pest, the compound is usually formulated into a composition which includes in addition to the compound of formula (I) suitable inert diluent or carrier materials, and/or surface active agents. Thus in two further aspects of the invention there is provided a nematicidal, insecticidal or acaricidal composition comprising an effective amount of a compound of formula (I) as defined herein and an inert diluent or carrier material and optionally a surface active agent.

The amount of composition generally applied for the control of nematode pests gives a rate of active ingredient from 0.01 to 10 kg per hectare, preferably from 0.1 to 6 kg per hectare.

The compositions can be applied to the soil, plant, seed, or other area to be protected, to the locus of the pests, or to the habitat of the pests, in the form of dusting powders, wettable powders, granules (slow or fast release), emulsion or suspension concentrates, liquid solutions, emulsions, seed dressings, fogging/smoke formulations or controlled release compositions, such as microencapsulated granules or suspensions.

Dusting powders are formulated by mixing the active ingredient with one or more finely divided solid carriers and/or diluents, for example natural clays, kaolin, pyrophyllite, bentonite, alumina, montmorillonite, kieselguhr, chalk, diatomaceous earths, calcium phosphates, calcium and magnesium carbonates, sulfur, lime, flours, talc and other organic and inorganic solid carriers.

Granules are formed either by absorbing the active ingredient in a porous granular material for example pumice, attapulgite clays, fuller's earth, kieselguhr, diatomaceous earths, ground corn cobs, and the like, or on to hard core materials such as sands, silicates, mineral carbonates, sulfates, phosphates, or the like. Agents which are commonly used to aid in impregnation, binding or coating the solid carriers include aliphatic and aromatic petroleum solvents, alcohols, polyvinyl acetates, polyvinyl alcohols, ethers, ketones, esters, dextrins, sugars and vegetable oils, with the active ingredient. Other additives may also be included, such as emulsifying agents, wetting agents or dispersing agents.

Microencapsulated formulations (microcapsule suspensions CS) or other controlled release formulations may also be used, particularly for slow release over a period of time, and for seed treatment.

Alternatively the compositions may be in the form of liquid preparations to be used as dips, irrigation additives or sprays, which are generally aqueous dispersions or emulsions of the active ingredient in the presence of one or more known wetting agents, dispersing agents or emulsifying agents (surface active agents). The compositions which are to be used in the form of aqueous dispersions or emulsions are generally supplied in the form of an emulsifiable concentrate (EC) or a suspension concentrate (SC) containing a high proportion of the active ingredient or ingredients. An EC is a homogeneous liquid composition, usually containing the active ingredient dissolved in a substantially non-volatile organic solvent. An SC is a fine particle size dispersion of solid active ingredient in water. To apply the concentrates they are diluted in water and are usually applied by means of a spray to the area to be treated. For agricultural or horticultural purposes, an aqueous preparation containing between 0.0001% and 0.1% by weight of the active ingredient (approximately equivalent to from 5-2000g/ha) is particularly useful.

Suitable liquid solvents for ECs include methyl ketone, methyl isobutyl ketone, cyclohexanone, xylenes, toluene, chlorobenzene, paraffins, kerosene, white oil, alcohols, (for example, butanol), methylnaphthalene, trimethylbenzene, trichloroethylene, N-methyl-2-pyrrolidone and tetrahydrofurfuryl alcohol (THFA).

Wetting agents, dispersing agents and emulsifying agents may be of the cationic, anionic or non-ionic type. Suitable agents of the cationic type include, for example, quaternary ammonium compounds, for example cetyltrimethyl ammonium bromide. Suitable agents of the anionic type include, for example, soaps, salts of aliphatic monoesters of sulfuric acid, for example sodium lauryl sulfate, salts of sulfonated aromatic compounds, for example sodium dodecylbenzenesulfonate, sodium, calcium or ammonium lignosulfonate, or butylnaphthalene sulfonate, and a mixture of the sodium salts of diisopropyl- and triisopropylnaphthalene sulfonates. Suitable agents of the non-ionic type include, for example, the condensation products of ethylene oxide with fatty alcohols such as oleyl alcohol or cetyl alcohol, or with alkyl phenols such as octyl phenol, nonyl phenol and octyl cresol. Other non-ionic agents are the partial esters derived from long chain fatty acids and hexitol anhydrides, the condensation products of the said partial esters with ethylene oxide, and the lecithins.

These concentrates are often required to withstand storage for prolonged periods and after such storage, to be capable of dilution with water to form aqueous preparations which remain homogeneous for a sufficient time to enable them to be applied by conventional spray equipment. The concentrates may contain 1-85% by weight of the active ingredient or ingredients. When diluted to form aqueous preparations such preparations may contain varying amounts of the active ingredient depending upon the purpose for which they are to be used.

The compounds of formula (I) may also be formulated as powders (dry seed treatment DS or water dispersible powder WS) or liquids (flowable concentrate FS, liquid seed treatment LS), or microcapsule suspensions CS for use in seed treatments. The formulations can be applied to the seed by standard techniques and through conventional seed treaters. In use the compositions are applied to the nematodes, to the locus of the nematodes, to the habitat of the nematodes, or to growing plants liable to infestation by the nematodes, by any of the known means of applying pesticidal compositions, for example, by dusting, spraying, or incorporation of granules.

The compounds of the invention may be the sole active ingredient of the composition or they may be admixed with one or more additional active ingredients such as nematicides or agents which modify the behaviour of nematodes such as hatching factors, insecticides, synergists, herbicides, fungicides or plant growth regulators where appropriate.

Suitable additional active ingredients for inclusion in admixture with the compounds of the invention may be compounds which will broaden the spectrum of activity of the compounds of the invention or increase their persistence in the location of the pest. They may synergise the activity of the compound of the invention or complement the activity for example by increasing the speed of effect or overcoming repellency. Additionally multi-component mixtures of this type may help to overcome or prevent the development of resistance to individual components.

The particular additional active ingredient included will depend upon the intended utility of the mixture and the type of complementary action required. Examples of suitable insecticides include the following:

Pyrethroids such as permethrin, esfenvalerate, deltamethrin, cyhalothrin in particular lambda-cyhalothrin, bifenthrin, fenpropathrin, cyfluthrin, tefluthrin, fish safe pyrethroids for example ethofenprox, natural pyrethrin, tetramethrin, s-bioallethrin, fenfluthrin, prallethrin and 5-benzyl-3-furylmethyl-(E)-(1R.3S)-2.2-dimethyl-3-(2-oxothiolan-3-ylidenemethyl) c clopropane carboxylate;

- b) Organophosphates such as profenofos, sulprofos, methyl parathion, azinphos-methyl, demeton-s-methyl, heptenophos, thiometon, fenamiphos, monocrotophos, triazophos, methamidophos, dimethoate, phosphamidon, malathion, chloropyrifos, phosalone, terbufos, fensulfothion, fonofos, phorate, phoxim, pyrimiphos-methyl, pyrimiphos-ethyl, fenitrothion or diazinon:
- Carbamates (including aryl carbamates) such as pirimicarb, cloethocarb, carbofuran, furathiocarb, ethiofencarb, aldicarb, thiofurox, carbosulfan, bendiocarb, fenobucarb, propoxur or oxamyl;
- d) Benzoyl ureas such as triflumuron, or chlorofluazuron;
- e) Organic tin compounds such as cyhexatin, fenbutatin oxide, azocyclotin;
- Macrolides such as avermectins or milbemycins, for example such as abamectin, ivermectin and milbemycin;
- g) Hormones and pheromones;
- h) Organochlorine compounds such as benzene hexachloride, DDT, endosulphan, chlordane or dieldrin;
- i) Amidines, such as chlordimeform or amitraz
- j) Fumigant agents;
- k) Nitromethylenes such as imidacloprid.

In addition to the major chemical classes of insecticide listed above, other insecticides having particular targets may be employed in the mixture if appropriate for the intended utility of the mixture. For instance selective insecticides for particular crops, for example stemborer specific insecticides for use in rice such as cartap or buprofezin can be employed. Alternatively insecticides specific for particular insect species/stages for example ovo-larvicides such as clofentezine, flubenzimine, hexythiazox and tetradifon, motilicides such as dicofol or propargite, general acaricides such as bromopropylate, chlorobenzilate, or growth regulators such as hydramethylnon, cyromazine, methoprene, chlorfluazuron and diflubenzuron may also be included in the compositions.

Examples of suitable synergists for use in the compositions include piperonyl butoxide, sesamax, safroxan and dodecyl imidazole.

Suitable herbicides, fungicides and plant-growth regulators for inclusion in the compositions will depend upon the intended target and the effect required.

An example of a rice selective herbicides which can be included is propanil, an example of a plant growth regulator for use in cotton is "Pix", and examples of fungicides for use in rice include blasticides such as blasticidin-S. The ratio of the compound of the invention to the other active ingredient in the composition will depend upon a number of factors including type of target, effect required from the mixture etc. However in general, the additional active ingredient of the composition will be applied at about the rate as it is usually employed, or at a slightly lower rate if synergism occurs.

#### **EXAMPLE 6**

In order to illustrate the nematicidal properties of the compounds of formula (I), the in vitro activity of compounds according to the invention against the root-know nematode, Meloidogyne incognita, was evaluated by placing an aqueous suspension of freshly hatched (0-24 hours old), second stage juveniles into a solution of candidate nematicide over a series of test rates. Test Chemicals were diluted to double the rate required in 1% of a mixture of ethanol and acetone (1:1) and 99% deionised water. 0.5 cm³ of chemical solution was then mixed with 0.5 cm³ of the nematode suspension (at 200 nematodes/cm³) in a glass vial. Each chemical was evaluated in a series of treatments over a range of application rates of 1.65-0.02 ppm (parts per million). Each treatment was replicated twice. The vials were capped and left for 72 hours in a constant environment room at 23°C. The numbers of dead and line nematodes were assessed visually for each treatment using a stereomicroscope. Results are express in Table A in terms of the observed mortality at the given application rate of the test chemical (meaned over the replicate treatments). Where appropriate, the results for a test chemical were statistically analysed to generate LC 50 and LC 90 values (the concentration of test chemical causing 50% and 90% mortality respectively).

	TABLE A	<u>4</u>	
Mortality	Rate	LC <sub>50</sub>	LC <sub>90</sub>
(%)	(ppm)	(ppm)	(ppm)
90.1	1.65		
77.7	0.55		
27.8	0.185	0.34	1.13
5.1	0.06		,
2.8	0.02		
96.9	1.65		٠
	(%) 90.1 77.7 27.8 5.1 2.8	Mortality Rate (%) (ppm) 90.1 1.65 77.7 0.55 27.8 0.185 5.1 0.06 2.8 0.02	(%) (ppm) (ppm) 90.1 1.65 77.7 0.55 27.8 0.185 0.34 5.1 0.06 2.8 0.02

XXII.1	94.7	0.55		
XXII.1	92.9	0.185	0.013	0.156
XXII.1	89.6	0.06	٠	
XXII.1	54.2	0.02		

#### **EXAMPLE 7**

This example demonstrates granules suitable for soil application. The granules can be made by standard techniques such as impregnation, coating, extrusion or agglomeration.

•		
		<u>%w/w</u>
Impregnated granule	: Active ingredient	5
	Wood Rosin	2.5
	Gypsum granules	92.5
	(20-40 mesh)	
Coated granule	Active ingredient	0.5
	`Solvesso'* 200	0.4
	Calcium carbonate granules	99.1
	(30-60 mesh)	
Slow release granule:	Active ingredient	10
	Polyvinylacetate/vinyl	5
	chloride copolymer latex	
	Attapulgus granules	85

#### **EXAMPLE 8**

This Example demonstrates formulations for use as a spray. The compounds can be formulated as wettable powders, water dispersible granules, suspension concentrates, emulsifiable concentrates, emulsions or microcapsule suspensions for application diluted in water.

	<u>g/l</u>
Active ingredient	250
Calcium dodecyl-	50
benzene sulfonate	
Nonyl phenol ethoxylate	50
Alkylbenzene solvent	to 1 litre
	Calcium dodecyl- benzene sulfonate Nonyl phenol ethoxylate

		<u>%w/w</u>
Wettable powder :	Liquid active ingredient	40
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	lignosulfonate dispersant	5
	silica	25
	sodium lauryl sulfate	3
	china clay (kaolin)	27
Microcapsule suspension:	Liquid active ingredient	250
•	toluene diisocyanate	10
	polymethylene polyphenyl	20
	isocyanate	
	nonyl phenol ethoxylate	6
	lignosulfonate dispersant	15
	xanthan gum	1
	bentonite	10
	biocide `Proxel'*	0.1
	sodium carbonate	, <b>5</b>
	water	to 1 litre

The microcapsule suspensions can be used as a spray, soil drench or as an intermediate to prepare slow release granules for application to the soil.

p.op.		g/l
Suspension concentrate:	Solid active ingredient	400
Saspendies - Sas	lignosulfonate dispersant	50
	sodium lauryl sulfate	. 30
	xanthan gum	1
	biocide 'Proxel'*	0.1
	bentonite	10
	water	to 1 litre

#### **EXAMPLE 9**

This Example demonstrates formulations suitable for use as seed treatments in conventional application machinery.

			<u>%w/w</u>
Dry seed treatment	:	Active ingredient	20

dodecyl benzene	3
Rubine Toner (dyestuff)	2.7
Talc	53.3
Silica	to 100%

The suspension concentrate and microcapsule suspension of Example 10 can be used as flowable concentrates for seed treatment.

#### **EXAMPLE 10**

This Example demonstrates the formulation of the compounds for electrostatic spraying.

	<b>≅</b> ∕1
Active ingredient	200
N-methylpyrrolidone	50
Soyabean oil	120
`Solvesso'* 200	to 1 litre

#### **EXAMPLE 11**

This Example demonstrates a formulation suitable for use as a bait.

<u>/w</u>
5
65
0

#### **EXAMPLE 12**

This Example demonstrates a formulation suitable for use as a bolus.

	mg
Active ingredient	1300
Sodium starch glycollate	300
Microcrystalline cellulose	1200
Lactose	2920
Povidone	250
Magnesium stearate	30 .

#### **EXAMPLE 13**

This Example demonstrates a formulation suitable for use as an injectable suspension.

		mg
Active ingredient	-	40

Sodium metabisulfite	1
Polysorbate 80	1
Sodium methyl hydroxybenzoate	2
Water to	l ml

#### **EXAMPLE 14**

This Example demonstrates a formulation suitable for use as an injectable solution.

•	mg
Active ingredient	20
Sodium citrate	6
Citric acid	1
Sodium chloride	7
Chlorcresol	1
Water to	lm

#### EXAMPLE 15

This Example demonstrates a formulation suitable for use as an oral suspension.

	g
Active ingredient	100.0
Polysorbate 80	2.0
Xanthan gum	5.0
Colloidal silicon dioxide	10.0
Methyl hydroxybenzoate	1.5
Citric acid monohydrate	10.0
Sodium citrate	10.0
Purified water to	1000.0ml

#### <u>Claims</u>

1. A compound of formula (I).

R-S(O)<sub>n</sub>CH<sub>2</sub>CH<sub>2</sub>C(CH<sub>3</sub>)=CF<sub>2</sub>

or a salt thereof, wherein n is 0, 1 or 2; and R is a group of formula (II) to (XXIV), wherein:

the S(O)nCH2CH2C(CH3)=CF2 group is at least one of R1 (when attached to a carbon atom), R2, R3, R4, R5, R6, R7 or R8;

R1 (when attached to a carbon atom), R2, R3, R4, R5, R6, R7 and R8 are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl,

alkynyl, cycloalkyl, alkylcycloalkyl, alkoxy, alkenyloxy, alkynyloxy, hydroxyalkyl, alkoxyalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted heteroaryl, optionally substituted heteroarylalkyl, optionally substituted aryloxy, optionally substituted arylalkoxy, optionally substituted aryloxyalkyl, optionally substituted heteroaryloxy, optionally substituted heteroarylalkoxy, optionally substituted heteroaryloxyalkyl, haloalkyl, haloalkenyl, haloalkynyl, haloalkoxy, haloalkenyloxy, haloalkynyloxy, halogen, hydroxy, cyano, nitro, -NR9R10, -NR9COR10, -NR9CSR10, -NR9SO2R10, -N(SO2R9)(SO2R10), -COR9, -CONR9R10, -alkylCONR9R10, -CR9NR10, -COOR9, -OCOR9, -SR9, -SOR9, -SO2R9, -alkyISR9, -alkyISOR9, alkylSO2R9, -OSO2R9, -SO2NR9R10, -CSNR9R10, -SiR9R10R10, -OCH2CO2R9, -OCH2CH2CO2R9, -CONR9SO2R10, -alkylCONR9SO2R10, -NHCONR9R10. -NHCSNR9R10, or an adjacent pair of R1, R2, R3, R4, R5, R6, R7 and R8 when taken together form a fused 5- or 6-membered carbocyclic or heterocyclic ring; R1 (when attached to a nitrogen atom) is hydrogen, optionally substituted alkyl, cycloalkyl, alkylcycloalkyl, hydroxyalkyl, alkoxyalkyl, optionally substituted aryl, optionally substituted arylalkyl, optionally substituted aryloxyalkyl, optionally substituted heteroaryl, optionally substituted heteroarylalkyl, optionally substituted heteroaryloxyalkyl, haloalkyl, hydroxy, cyano, nitro, -NR9R10, -NR9COR10, NR9CSR10, -NR9COOR10, -NR9SO2R10, -N(SO2R9)(SO2R10), -COR9, -CONR9R10, -alkylCONR9R10, -CR9NR10, -COOR9, -OCOR9, -SOR9, -SO2R9, alkylSR9, -alkylSOR9, -alkylSO2R9, -OSO2R9, -SO2NR9NR10, -SR9, -SOR9, -SO2R9, -CSNR9R10, -SiR9R10R9, -OCH2CO2R9, -OCH2CH2CO2R9, -CONR9SO2R10, -alkylCONR9SO2R10, - NHCOR9R10, or -NHCSR9R10; and R9, R10 and R11 are each independently hydrogen, optionally substituted alkyl, optionally substituted alkenyl, alkynyl, optionally substituted aryl, optionally substituted arylalkyi, haloalkyi, haloalkenyi, haloalkynyi, halogen, or hydroxy.

2. A compound according to claim 1, wherein: R1 (when attached to a carbon atom) to R8 are each independently hydrogen; nitro; halogen; cyano; -CH=NOH; C1-4 alkyl; C1-4 haloalkyl; C1-4 alkenyl; C1-4 haloalkenyl; cyclopropyl; hydroxy; C1-4 alkoxy; C2-4 alkoxyalkyl; -COOH; C2-4 alkoxycarbonyl; C2-4 haloalkenyloxycarbonyl; -CONH2; mono or di-C1-2 alkylaminocarbonyl; C2-4 alkanecarbonyl; -CONHSO2 C1-4 alkyl.

preferably -CONHSO2CH3; phenyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl, C1-4 alkoxy or aminosulfonyl; benzyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl or C1-4 alkoxy; phenoxy optionally mono- or di- substituted with groups independently chosen from halogen, cyano, CI-4 alkyl or C1-4 alkoxy; amino optionally mono- or di- substituted with C1-4 alkyl groups; -SH; C1-4 alkylthio; benzylthio optionally mono- or di- substituted with groups independently chosen from halogen or C1-4 haloalkyl; C1-4 alkenylthio; C2-4 haloalkenylthio; a second S(O)nCH2CH2CH=CF2 group; C1-4 alkanesulfonyl; C1-4 haloalkanesulfonyl; fluorosulfonyl; mono- or di- C1-4 alkylsulfamoyl; a 5 or 6 membered heteroaryl group, for example, furyl, pyrazinyl, pyridinyl or thienyl, optionally substituted with halogen; or any adjacent pair forms a fused 5- or 6- carbocyclic or heterocyclic ring; and R1 (when attached to a nitrogen atom) is hydrogen; nitro; cyano; -CH=NOH; C1-4 alkyl; C1-4 haloalkyl; cyclopropyl; hydroxy; -COOH; C2-4 alkoxycarbonyl; C2-4 haloalkenyloxycarbonyl; -CONH2; mono or di-C1-2 alkylaminocarbonyl; C2-4 alkanecarbonyl; -CONHSO2 C1-4 alkyl, preferably -CONHSO2CH3; phenyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl, C1-4 alkoxy or aminosulfonyl; benzyl optionally mono- or di- substituted with groups independently chosen from halogen, nitro, C1-4 alkyl or C1-4 alkoxy; phenoxy optionally mono- or di- substituted with groups independently chosen from halogen. cyano, C1-4 alkyl or C1-4 alkoxy; amino optionally mono- or di- substituted with C1-4 alkyl groups; -SH; C1-4 alkylthio; benzylthio optionally mono- or di-substituted with groups independently chosen from halogen or C1-4 haloalkyl; C1-4 alkenylthio; C2-4 haloalkenylthio; a second S(O)nCH2CH2C(CH3)=CF2 group; C1-4 alkanesulfonyl; C1-4 haloalkanesulfonyl; fluorosulfonyl; mono- or di- C1-4 alkylsulfamoyl; a 5 or 6 membered heteroaryl group, for example, furyl, pyrazinyl, pyridinyl or thienyl, optionally substituted with halogen.

3. A process for the preparation of a compound of either of claims 1 and 2, where n is 0, comprising reacting a compound of formula (XXVI)

R-SH (XXVI)

with a compound of formula (XXVII)

where R is as defined in claims 1 and 2, and L is a good leaving group, and then conducting a dehydrobromination step.

4. A process for the preparation of a compound of either of claims 1 and 2, where n is 0, comprising reacting a compound of formula (XXX)

with a compound of formula (XXXI)

where R is as defined in claims 1 and 2, and L is a good leaving group, and then conducting a dehydrobromination step.

- 5. A process for the preparation of a compound of either of claims 1 and 2, when n is 1 or 2, which comprises oxidation of the correspondingly substituted compound of formula (I) when n is 0.
- 6. An agricultural composition comprising a compound of either of claims 1 and 2 as the active ingredient in admixture with an agriculturally acceptable diluent or carrier.
- 7. An agricultural composition according to claim 6, further comprising a surface active material.
- 8. An agricultural composition according to either of claims 6 and 7, further comprising at least one other active ingredient which is an insecticide, fungicide, bactericide, acaricide or other biologically active compound.

- 9. A process for preparing an agricultural composition of any one of claims 6 to 8, comprising admixing the compound of either of claims 1 and 2 and the agriculturally acceptable diluent or carrier.
- 10. A method for killing or controlling nematode, insect or acarid pests comprising applying a compound of either of claims 1 and 2, or a composition of any one of claims 6 to 8, to the pests, their habitat, or a plant susceptible to attack by the pests.

Patents Act 1977 Examiner's report (The Search report)	to Comptroller under Section 17	Application number GB 95.5
Relevant Technical		Search Examiner P N DAVEY
(i) UK Cl (Ed.N)	C2C (CQL, CQM, CQS, CQN, CQT)	
(ii) Int Cl (Ed.6)	C07C, C07D	Date of completion of Search 6 NOVEMBER 1995
Databases (see belo (i) UK Patent Office patent specifications	e collections of GB, EP, WO and US	Documents considered relevant tollowing a search in respect of Claims:- 1-10
(ii) ONLINE: CAS	ONLINE	

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